Printing Equipment Engineer

MARCH, 1942

★ ★

Unprecedented Demands

War is overshadowing everything in our lives. Printers' markets are changing to conform to its needs. Our country is under the stress of heavy demands—some foreseen and others unforeseen; government, war industries and civilian business requirements—all must be met to maintain the progress of war effort and other needs.

Quantity, quality, time—all elements of paramount importance—are factors of varying weight that will affect printing production. Unusual demands may strike any printing plant, in any locality, at any time. The graphic arts must meet these demands to fulfill its duty.

The printing industry should be alert—in both personnel and equipment. Preventive maintenance of presses is a practical contribution to the alertness necessary in our industry. The Harris service organization is available to assist plant managements in their efforts to maintain equipment at maximum efficiency.

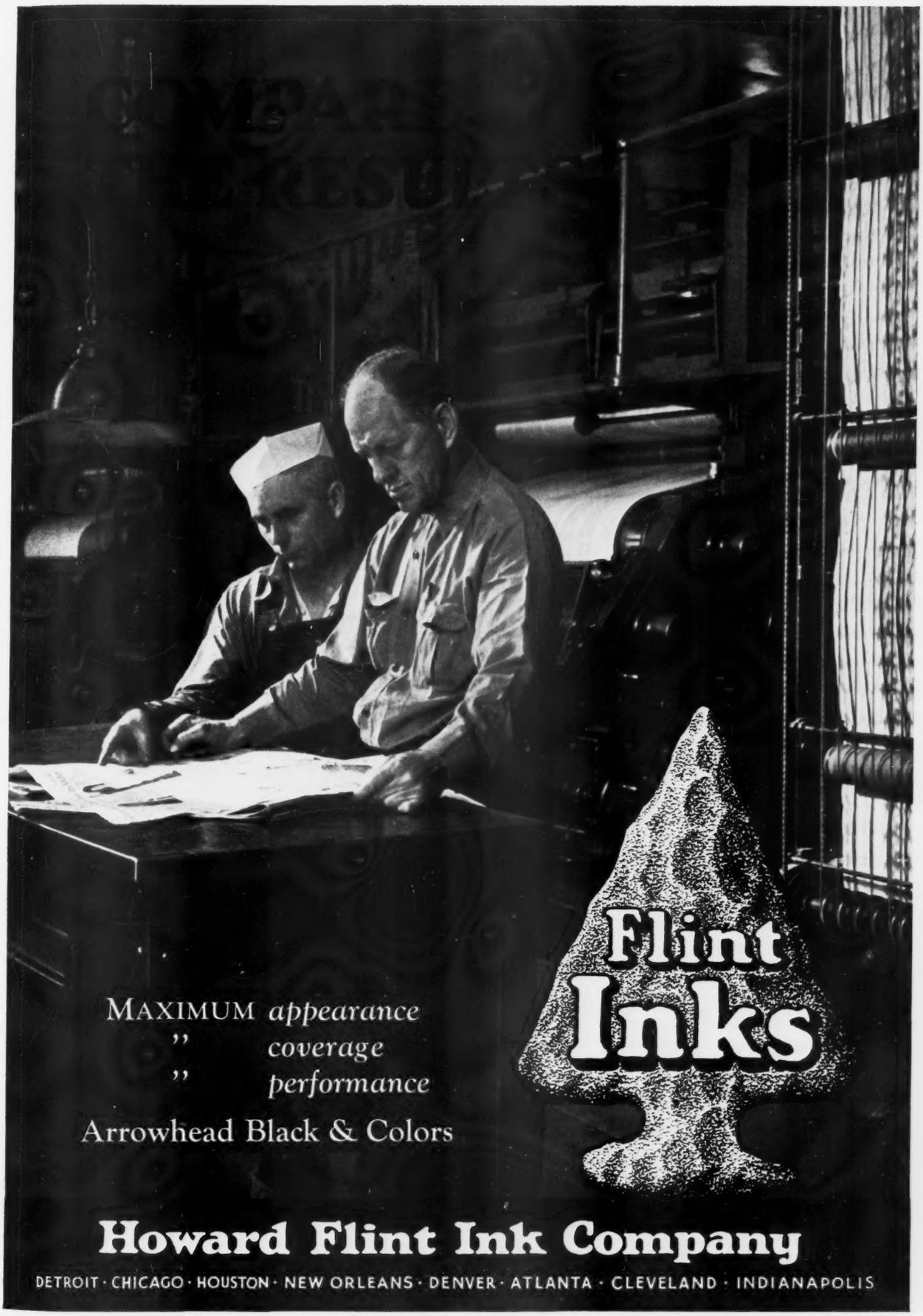
★

HARRIS OFFSET PRESSES

·HARRIS · SEYBOLD · POTTER · COMPANY·

PIONEER BUILDERS OF SUCCESSFUL OFFSET PRESSES

General Offices: 4510 East 71st St., Cleveland, Ohio • *Harris Sales Offices:* New York, 330 West 42nd St. • Chicago, 343 So. Dearborn St. • Dayton, 819 Washington St. • Atlanta, 220 Luckie St, N. W., • San Francisco, 420 Market St. • Harris-Seybold-Potter (Canada) Ltd., Toronto, Montreal • *Factories:* Cleveland, Dayton


MAXIMUM appearance
" coverage
" performance
Arrowhead Black & Colors
Flint
Inks
Howard Flint Ink Company
DETROIT · CHICAGO · HOUSTON · NEW ORLEANS · DENVER · ATLANTA · CLEVELAND · INDIANAPOLIS

Adjustable Chase developed by two Cincinnati printing executives designed for fast lockup of type matter which is to be plated

By STAFF WRITER

A TYPE-HIGH adjustable chase which can be fitted to lock up any type form from 1 in. square up to the limit of the bar lengths for use during stereotype, electrotype, rubber plate or rubber stamp molding operation, including the taking of engravers' proofs has been developed by two Cincinnati printing executives. These men are Foreman Leonard Dourson of the Stereotype Department and Frank A. Kemen, Assistant Composing Room Foreman of S. Rosenthal & Co., 22 East 12th St., Cincinnati, Ohio. The company and the inventors own the patent.

In speaking of the adjustable chase, George W. Rosenthal of S. Rosenthal & Co., stated: "There are several interesting features about this chase. Chief among these is that use of the chase for locking up material which is to be reproduced eliminates several operations ordinarily employed when a form is locked up in the conventional manner.

"A form or job to be locked up customarily is handled in the following manner: The compositor first secures a chase and places it about the form. He then measures the space between form and chase with a line gauge to ascertain its dimensions. Nonpareil slugs to provide clearance between type and bearers are procured. The slugs are then measured for bearer material (type-high Monotype or foundry rule being used for the bearers). The bearer material is procured and cut to size by saw-trimmer or handcutter. The string with which the form is tied is removed and the bearer material is placed around the form. Wood furniture is used to fill out the space remaining between the form and the chase, leaving room for quoins on two sides. After the impression or mat is made, the compositor must unlock the form, lift out and return chase, quoins and wood furniture to racks. The bearer material is then either put away or discarded, according to the rules of the particular printing plant. The form is now retied with string and is ready for filing."

When using the Adjustable Chase for locking up a form, the four adjustable bars comprising the chase are fitted around the type form. The engagement of the four parts is such that they form a rigid chase when locked up on two sides in a manner similar to the conventional chase which is locked with quoins. The string wound round the type matter can be but need not be removed before locking in the Adjustable Chase.

After the molding impression or stereotype mat has been made, the chase is unlocked and removed and the type form is ready to be filed.

As has been stated above, the chase bars are type-high and are adjustable to fit any size form from 1 in. sq. up to the maximum capacity of the bars.

The Adjustable Chase is so formed that when it is disposed about a type form and tightened, an even squeeze will be exerted without danger of distorting the form through any uneven squeeze. Mr. Rosenthal states a form can be locked in the Adjustable Chase in ½ min. time or less.

New England To Hear Chemist

The guest speaker at the next regular meeting of the newly formed Connecticut Valley Litho Club to be held in Hartford, Conn., on Friday, April 17, will be William H. Wood, Director of Chemical Research for Harris Seybold Potter Company. In addition to Mr. Wood's talk *Synthetics and Their Importance Today* there will be a showing of a movie film.

All printers and lithographers in the New England area are invited to this meeting.

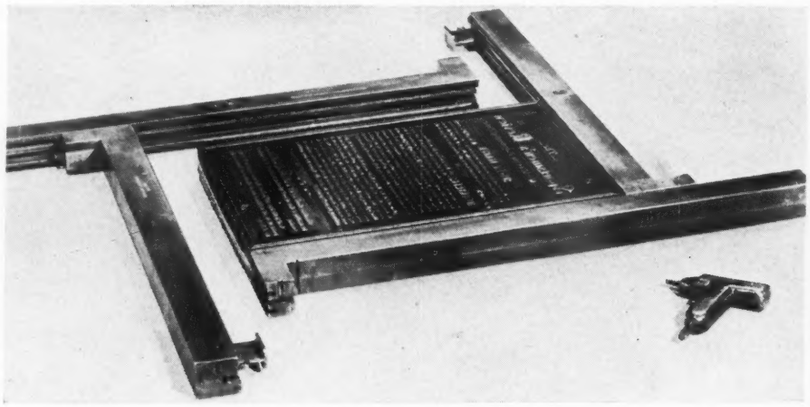


Fig. 1—The four bars of the Adjustable Type-High Chase are laid about the type form preparatory to having the form molded for stereotyping, electrotyping or rubber plate making, or rubber stamp making. The one bar is aligned at the head of the type form and a second bar is engaged to the first bar but is positioned at one side of the type form, as shown above. Serrations spaced a nonpareil part and marked in picas similar to a compositor's pica rule, lock the bars lengthwise. A sliding lock is moved inwardly and engaged to lock the bars crosswise. The third and fourth bars are locked together in the same manner at the same pica markings as on the first two bars.

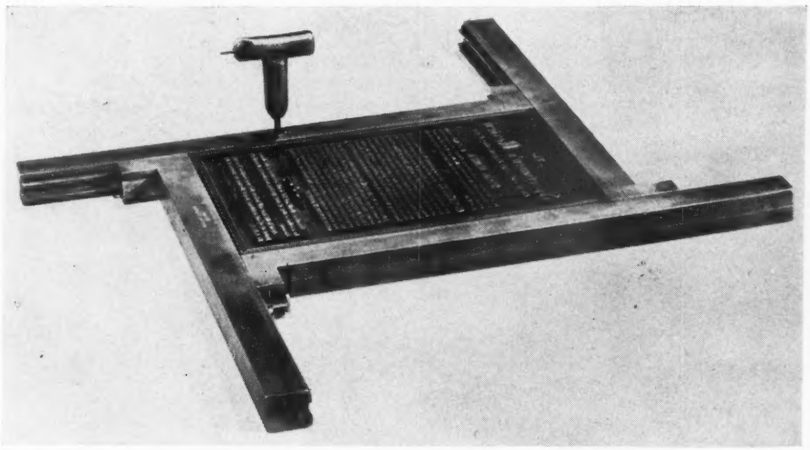


Fig. 2—Here is shown the completed lockup. As is explained in the caption for Fig. 1, bars Nos. 3 and 4 were moved into engagement with bars Nos. 1 and 2, the serrations and sliding lock being engaged. Then the key was inserted into the Allen screw wrench sockets in two of the bars and turned to bring the form locking bars into play. The resulting even pressure locks the form into what is now a solid chase which can be moved or handled just like any other chase. The entire operations shown in Figs. 1 and 2 require less than ½ min., according to Geo. W. Rosenthal of S. Rosenthal & Co.

BIG NEWS-HEADS with the LUDLOW—

The newspaper operating with Ludlow equipment can have all the big type it needs for today's important news-heads without a moments delay, and without casting or storing any type in advance of setting. With the Ludlow, you can produce just as many big headlines as desired and deliver them when needed, besides meeting economically all other display requirements.

JAP ARMIES Near Borders

96 point Tempo Heavy Condensed

SUB IS SUNK By Naval Flier

96 point Tempo Bold Condensed

Specimen sheets showing these and other Ludlow typefaces suitable for setting "big heads for big news" will be sent on request.

LUDLOW TYPOGRAPH CO. 2032 Clybourn Avenue, Chicago

CHAMPION MOVES to the War Front

Champion supplies pulp for explosives and paper to Government and to war industries. They also cooperate in every way with federal agencies to get the greatest possible production. Although war activities come first, Champion still makes paper for essential civilian needs. Ideal locations, farsighted control of raw materials, excellent equipment, and long experience in research and manufacture... all contribute to the production of the finest printing paper possible in this emergency.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

DISTRICT SALES OFFICES

NEW YORK · CHICAGO · PHILADELPHIA · CLEVELAND · BOSTON · ST. LOUIS · CINCINNATI · ATLANTA

TECHNICAL BOOKS

- **STANDARD BOOK ON ESTIMATING for PRINTERS —By Fred W. Hoch.** Revised 1941 edition. This book is a primer for students and a reference for printers and estimators. Every printing plant should have a copy. Author explains all operations in commercial printing plant and shows production time allowance for each in hours and decimal hours. Size, 6 in. by 9¼ in., 268 pages, $3.75 per copy, cash with order.
- **PRINTING INKS** — Their Chemistry and Technology —**By Carleton Ellis.** Bound in cloth, 6 in. by 9½ in., 560 pages, well illustrated. For printing executives, pressmen, photo-engravers, platemakers, ink manufacturers, chemists, paper-makers. Author stays close to printing plant. The solving of new production problems brought about by technological improvements, both in equipment and inks, created the urgent need for this book. Price $7, cash with order.
- **THE PRACTICE OF PRESSWORK — By Craig R. Spicher.** We offer copies to our readers, at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).
- **LITHOGRAPHER'S MANUAL—Compiled by Walter E. Soderstrom.** Second revised edition. Technical information from copy to finished job. Nationally known technical men contributed the bulk of practical camera, platemaking and presswork information. Size 8½ in. by 11¼ in. Bound in red cloth, gold stamped. Many of the 368 pages are illustrated. Price $5 per copy, cash with order.
- **PHOTOGRAVURE — By H. Mills Cartwright.** Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
- **MANUAL OF STEREOTYPING — By Joseph Goggin.** This 256-page book conveys technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.

PRESSROOM PROBLEMS AND ANSWERS — By Fred W. Hoch. Might be considered a miniature encyclopedia since it contains answers to 334 pressroom problems which have been answered by Mr. Hoch. Written in language of journeyman pressman. Pressmen, production men, paper and ink manufacturers, electrotypers and photo-engravers will find this book of high utility when pressroom problems arise in which tendency is to lay blame on furnished materials used in pressroom production. Size, 6 in. by 9½ in., 258 pages, gold stamped blue cloth. Price, $3 per copy, cash with order.

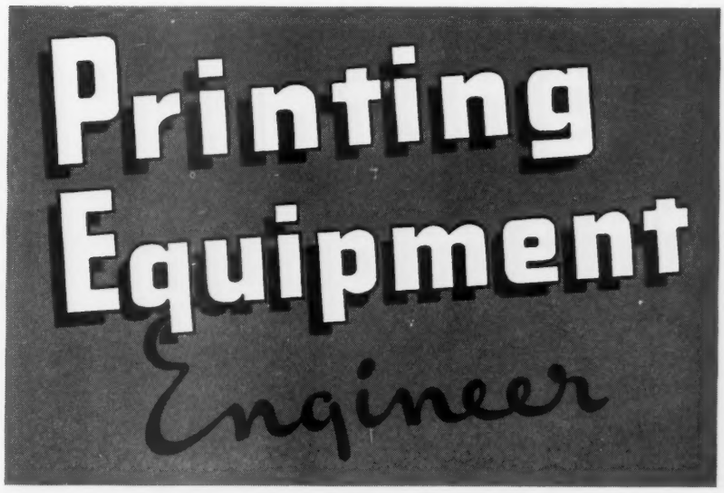
- **HOW TO ADJUST WORK-UPS — By Wm H. Lichter and Geo. F. Smalley.** Booklet consists of 24 pages in which are analyzed and remedies are given for prevention and/or elimination of work-ups. Material written as result of actual plant experience. Size, 5¼ in. by 7¼ in. Price, $1 per copy, cash with order.
- **HANDBOOK FOR PRESSMEN — By Fred W. Hoch.** Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts, $3 per copy, cash with order.

Send All Orders With Remittance to

PRINTING EQUIPMENT Engineer

1276 W. Third Street
Cleveland, Ohio

A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field.



Leading Articles, March 1942

Adjustable Chase for Plate Reproduction 2

Standardizing Photo-engraving Plate Stock 9
JOHN WRIGLEY

Production Department for Lund Press 10

Guide for Selection of Ball Bearing Lubricants 12
H. O. SMITH

Book Plates by Million Expected to be Scrapped 14

Conservation Program of Crowell-Collier 14

Northwest Newspaper Mechanical Conference 18

Spot Color for Charleston (N.C.) *News* 20
C. B. CAPPS

Executive Paragraphs 24

Printing Patents Report 29

PRINTING EQUIPMENT Engineer, a monthly publication, Volume 63, No. 6. Published at 1276 West Third St., Cleveland, Ohio. March, 1942. • MacD. Sinclair, Editor. Adam Henri Reiser, Associate Editor. John E. Cobb and J. Homer Winkler, Contributing Editors. • Don Will, Publisher. Eastern Representative, Russ Birchfield, 509 Fifth Ave., New York, N. Y., phone VAnderbilt 6-0890. Western Representative, E. P. Bloomster, 232 East Erie St., Chicago, Ill., phone SUperior 2444.

Copyright 1942 by The Willsea Pub. Co.

• Subscription price per year, $3.50 in advance in U. S. A. Single copy current issues, 35c. Feature issues, $1.00. December Equipment and Supplies Catalog Issue, $1.00. Subscriptions in foreign countries, $4.50 in advance, U. S. currency. • Printed in U. S. A.

MEMBER CONTROLLED CCA CIRCULATION AUDIT

Now SCRAP is a fighting word too!

And "scrap" we can, for our liberty, our country and our industry.

Those obsolescent "ghosts"; those outmoded presses have a new value.

***First*—as scrap metal—a vitally essential ingredient of the new steel and iron products so desperately needed for armament.**

***Second*—as a three or four fold credit towards future new presses under the War-Time Miller Scrap Allowance Plan.**

This Plan provides an opportunity, with many advantages, to convert inactive presses into scrap for armament and at the same time have immediate cash return and future reserve towards new press purchase. It is briefly described at the right.

Announcing a New War-Time

MILLER SCRAP ALLOWANCE PLAN

SCRAP metal is vitally essential in making tanks, battleships, guns, munitions and the machine tools with which they are made.

From our years of press building experience, we know the great number of obsolete presses that exist. As one of the first in the large industries to convert our production to war materials, we recognize the great tonnage of useful scrap metal in these obsolete presses. Therefore, as arms manufacturers of the present, and printing press builders of the past and future, we see in the scrapping of obsolete presses a possible substantial contribution to our armed forces as well as to the printing industry.

Therefore, to any reputable concern who *by previous arrangement with us* shall scrap any Cylinder Press — two options are offered under the War-Time Miller Scrap Allowance Plan.

OPTION 1. — We are prepared to issue a credit certificate, good until two years after the end of the present war, and in an amount *two times* that of the used machine's scrap value, the printing concern to keep the actual cash money received for the scrap, thus actually receiving three times the scrap value of the old press.

OR

OPTION 2. — We will issue a credit certificate, good until two years after the end of the present war, but in an amount *three times* that of the used machine's scrap value, provided the cash amount received for the scrap is immediately forwarded to us for conversion into Defense Savings Bonds and Stamps which we will issue in the name of the printing concern and promptly return to them. Thus, the printing concern will actually receive four times the scrap value of the old press.

No immediate new Miller purchase need be contracted for, and even if the credit certificate holder chooses to never use it for such new equipment purchase, the holder will have lost nothing as he will have received the actual scrap value of the discarded equipment in cash or Defense Bonds and Stamps.

We hope by these means to:

1. Release potential tonnage of scrap metal for defense of our country.

2. Eliminate obsolete presses which, if resold, might become a menace to the standards of the industry.

3. Enable our customers and those who contemplate the eventual purchase of Miller equipment to set up a reserve for the rehabilitation of their pressrooms after the war.

4. Assist in liquidating unneeded equipment for its maximum cash value now.

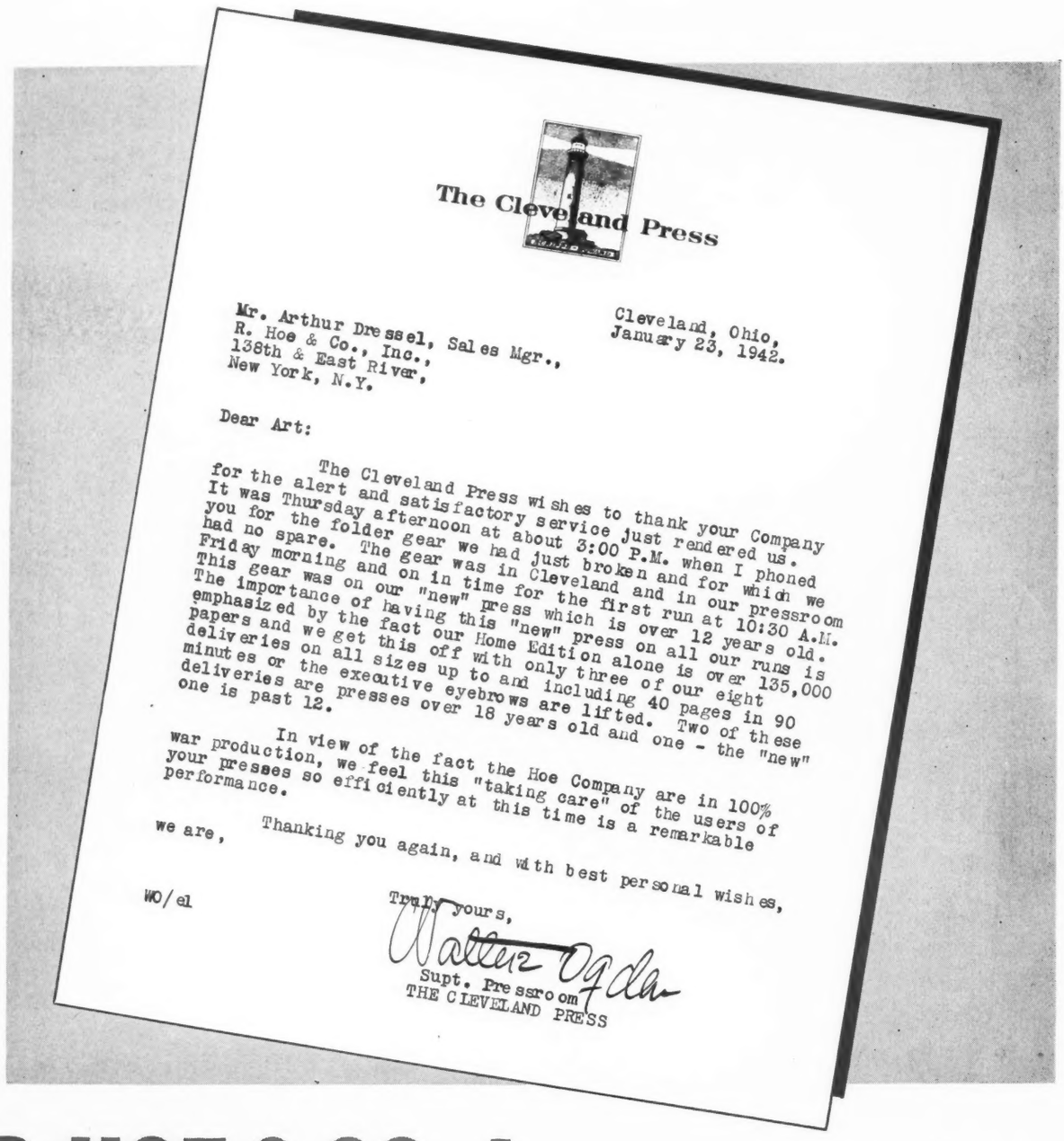
MILLER PRINTING MACHINERY CO., PITTSBURGH, PA.

miller

Full particulars on the new War-Time Miller Scrap Allowance Plan will be gladly given upon request, or may be obtained in many instances by a telephone call or letter to your local printing trades association.

ALL OUT FOR VICTORY

...but servicing our customers



The Cleveland Press

Cleveland, Ohio,
January 23, 1942.

Mr. Arthur Dressel, Sales Mgr.,
R. Hoe & Co., Inc.,
138th & East River,
New York, N.Y.

Dear Art:

The Cleveland Press wishes to thank your Company for the alert and satisfactory service just rendered us. It was Thursday afternoon at about 3:00 P.M. when I phoned you for the folder gear we had just broken and for which we had no spare. The gear was in Cleveland and in our pressroom Friday morning and on in time for the first run at 10:30 A.M. This gear was on our "new" press which is over 12 years old. The importance of having this "new" press on all our runs is emphasized by the fact our Home Edition alone is over 135,000 papers and we get this off with only three of our eight deliveries on all sizes up to and including 40 pages in 90 minutes or the executive eyebrows are lifted. Two of these deliveries are presses over 18 years old and one - the "new" one is past 12.

In view of the fact the Hoe Company are in 100% war production, we feel this "taking care" of the users of your presses so efficiently at this time is a remarkable performance.

Thanking you again, and with best personal wishes, we are,

Truly yours,

Walter Ogden

Supt. Pressroom
THE CLEVELAND PRESS

WO/el

R. HOE & CO., Inc.

General Offices:
910 East 138th St. (at East River) New York, N.Y.
BIRMINGHAM BOSTON CHICAGO SAN FRANCISCO

A Plan for Standardizing Photo-engraving Plate Stock to

Prevent Waste

By JOHN WRIGLEY*

*Superintendent, The Southwestern Engraving Co., Houston, Texas

STANDARDIZATION in all manufacturing industries is a means to waste prevention. Now that the metal supply for photo-engraving is a serious consideration, standardization of "flat" sizes is an important step in effecting a large saving in scrap metal. Scrap metal is a direct waste in every photo-engraving plant. If it is not kept down to the minimum, the loss will soon amount to an astonishing figure.

New metal sheets now cost nearly six times as much as scrap and in some localities, under certain conditions of purchase, at least this figure. All edge trimmings and pieces too small for practical use, if stacked around and finally junked, represent a direct waste of both metal and money. Such strips and small pieces result from careless and thoughtless cutting of copper and zinc sheets. It is now not only patriotic to conserve but it is necessary and wise.

A plan for the conservation of engravers' metal is offered below. It is hoped this idea will receive the careful consideration of all engravers who may not be using some kind of metal conservation plan.

Standard size "flats" should be made up that will best fit in with the particular requirements of the type of plates and the sizes regularly ordered by buyers.

Through force of habit in many plants and as a hand-down from the old wet plate days, the stripping glass sizes might be say, 11 in. by 14 in. and 14 in. by 17 in. with possibly a very few odd size pieces for larger work. If investigated, it will be found that much waste in metal, and time as well, is being caused by using the 14 in. by 17 in. or some similar size—simply because it has been in use for years and nobody has given the matter much thought.

A little study of the requirements of any engraving plant will enable you to effect a large saving in metal cost if "flat" sizes are made to fit the work in progress. In plants doing magazine and book work, school annuals, etc., many plates of a given size are made. It is easy to standardize the flat sizes so that two, four, six or eight or like number of subjects may be put on a plate and the waste in small pieces and trimmings may be brought down to the minimum.

When business falls off, service often picks up. Being eager to show how much service one may give may result in undue waste in metal cutting.

Without disturbing any service set-up, try using say three or perhaps more standard size sheets of zinc and copper. Suppose the 18 in. by 22 in., the 16 in. by 20 in. and the 14 in. by 34 in. sizes are decided upon. By cutting these sheets in half, we have 11 in. by 18 in., 10 in. by 16 in. and 14 in. by 17 in. pieces. The 18 in. by 22 in. and 16 in. by 20 in. sizes may also be cut into quarters; we then have 9 in. by 11 in. and 8 in. by 10 in. A 14 in. by 34 in. sheet may be cut into three pieces to give plates 14 in. by 11⅓ in. All of the three original stock sizes may be cut into eight equal pieces when the work falls off. The following sizes result from this plan: 5½ in. by 9 in.; 5 in. by 8 in. and 7 in. by 8½ in.

Smaller pieces than those suggested above may be coated or sensitized if the whirl clamp is fitted to hold small pieces. A sketch of such an easily made attachment is printed here. Any handy man can fashion one of similar design and fit it to the clamp to provide a permanent or auxiliary unit. If made of wood, apply several coats of shellac or varnish or boil in hot paraffin. This simple attachment will save money for any engraver.

A long narrow sheet of metal such as 14 in. by 34 in. or 17 in. by 28 in. will serve for irregular sizes.

Good management will be the means for saving many plants during and after this war. The cost of all materials is high now. Some of our materials are on priority lists while others are heavily taxed. Still others are becoming so scarce we may be compelled to find substitutes for them.

Up to last year (except possibly during the last world war) we did not give as much thought to the cost and scarcity of materials as we did to the cost of labor. Now—the picture is different. Today we have a combination of the two and the situation seems to be getting worse for tomorrow.

It is wise at this time, to make a deep study of plant management. Every item of material and labor cost should be known to the penny.

It is now the patriotic and economic duty of every employee to conserve materials and equipment in defense of country and employer alike. The use of standardized sizes such as is described above will show a margin of profit in production costs.

Extend the metal-cutting idea to other materials such as film, glass, wood and paper. All spaces on flats should be painted in as closely as possible, or if there is time cut out on the negative to save acid, powder, and metal.

Check your make-overs. Make-overs really are a serious expense now.

We are at war. If you do not go to fight, start a war at home on waste!

Is Your Mailing Address Correct?

Printing Equipment Engineer will appreciate it very much if you will check the mailing address under which your copy of this magazine reaches you every month. If the address is not correct, or if you are receiving it under the name of your predecessor, please let us know about it. If you are contemplating a change of business address, will you send us your new address and if possible, the name of your successor? It is important that our mailing list be kept as up-to-date as possible. In many cases, we have no way of knowing about address changes promptly other than voluntary information received from our executive readers.

EXHIBITS CALLED OFF

Announcement has been made by Manager W. E. Wines of the A.N.P.A. Mechanical Department that no equipment and supplies exhibits will be held at the June 8-10 Mechanical Conference to be held at the Drake Hotel, Chicago. It was decided not to hold the exhibits after the matter had been considered by the directors immediately following expression by a considerable majority of former equipment and supplies exhibitors that it would be inadvisable to hold such exhibits at this year's conference.

In the association's Mechanical Bulletin No. 268, it has been announced that the present disturbed supply situation—shortages, substitutes, priorities—will be a highlight of the conference.

The forum style of session, inaugurated at last year's Buffalo conference, will be continued this year at Chicago. Included will be a meeting on addressing and mailing equipment and methods for newspapers.

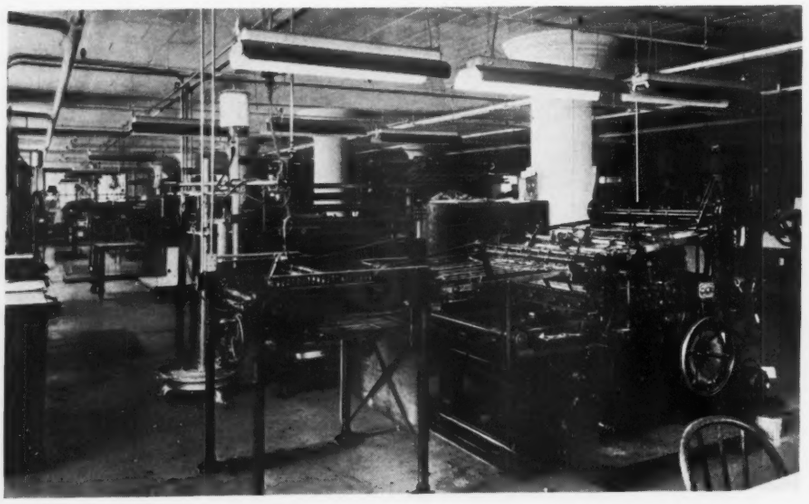
Must Apply to Local Tire Rationing Board

It is of absolutely no avail for a civilian consumer to apply to the War Production Board for a priority rating in the hope that such a rating will enable him to purchase a new tire or tube, Leon Henderson, OPA administrator, said in a statement issued Feb. 27. The statement was made to clear up misunderstandings of procedure that, according to tire rationing officials, still seem to exist in some quarters.

"Except for those on which the army or navy directly purchases the tires," Mr. Henderson emphasized, "the only way for any vehicle, even though it is engaged in work on a military project, to get casings or tubes is through application to the local rationing board."

Production Department,

19,500 sq. ft. area, in New Home of Lund Press, Minneapolis, is Unbroken by Partitions of Any Kind



Plenty of space and light dominate the new streamlined printing plant of The Lund Press, Inc., 700 Fourth Street, South, Minneapolis, Minn. The whole work floor occupies an uninterrupted area with no intervening partitions or inconvenient niches in the 19,500 sq. ft. of floor space.

AT a time when many printing executives are talking about economy and retrenchment, W. O. Lund, proprietor of The Lund Press, Inc., Minneapolis, Minn., has moved in the opposite direction by taking his plant to its third home since establishment in 1924. Starting in December, 1941, Mr. Lund recently completed transporting his printing plant from 406 Sixth Avenue, South, to much finer quarters at 700 South Fourth Street, where it occupies 19,500 square feet of floor space, all on one floor. Production continued throughout the moving process with minimum interruption.

Celebrating the move, The Lund Press held open house on February 13. About 500 of Mr. Lund's friends from the Graphic Arts industry and from other walks of life came in to admire his plant from 5 until 9 o'clock and to partake of a Scandinavian smorgasbord provided for them.

Aside from the offices and proofroom, there are no partitions in the plant. One can leave the front office and follow the entire production flow clockwise around the workroom floor without once opening a door or detouring into a niche. There is ample room around all machines and cabinets for workmen to move without bumping into each other or into equipment. The floor plan was prepared by C. M. Foss, American Type Founders engineer of Chicago.

Lund Press, Inc., Minneapolis, Moves Into New Quarters — Streamlined Workflow

Just recently, the Lund Press, Inc., Minneapolis, moved into new second-floor quarters. The floor area is 19,500 sq. ft. Natural daylight is provided by generous window space extending around three sides of the floor. Artificial daylight is provided from 127 fluorescent units.

This is an interesting example of straightline production operation. Note that work enters the mechanical departments at the superintendent's desk *1* at one side of the office door. The copy is sent immediately to the composing department and flows into the jobber section of the pressroom or to the cylinder presses, and from there to the bindery, then to the shipping department alongside the freight elevator. The production flow is altogether clockwise in motion throughout the plant.

The paper stock storage space and the paper cutting department are placed near the cylinder presses where the heavier stock is used, thus eliminating extended movement of heavy stock.

All equipment which must be moved about the plant, including the paper handling trucks, is mounted on wheels to make the work of Lund craftsmen easier and more efficient.

In this type of plant layout, the business office and production departments are intimately associated with each other. This makes for elimination of lost motion. The plant layout was supervised by the engineering department of ATF's Chicago office.

Key numbers for the various mechanical departments are as follows:

Composing Room

1—Superintendent's Desk
2—Type Cabinet with Galley Cabinet
3—Flat Top Type Cabinet
4—Two-Thirds Size Type Cabinet
5—Linotype
6—Magazine Rack
7—Machinist's Bench
8—Matrix Sorts Cabinet
9—Elrod Caster
10—Line-composing Machine Dump Table with Slug Router
11—No. 3 Vandercook Proof Press
12—No. 4 Vandercook Proof Press
13—Potter Proof Press
14—Galley Cabinets
15—Proofreading Department
16—Saw
17—Mitering Machine
18—Makeup Table
19—Imposing Stone
20—Furniture Cabinet
21—Reglet Cabinet
22—Cylinder Chase Racks
23—Cylinder Chase Racks
24—Two-high Galley Cabinet
25—Galley Cabinets
26—Die-cutting Cabinet
27—Three-tier Letterboard Cabinet
28—Wood Type Cabinet
29—Cut Cabinets
29a—Cut Storage Cabinets
30—Lineup Table

Jobber Pressroom

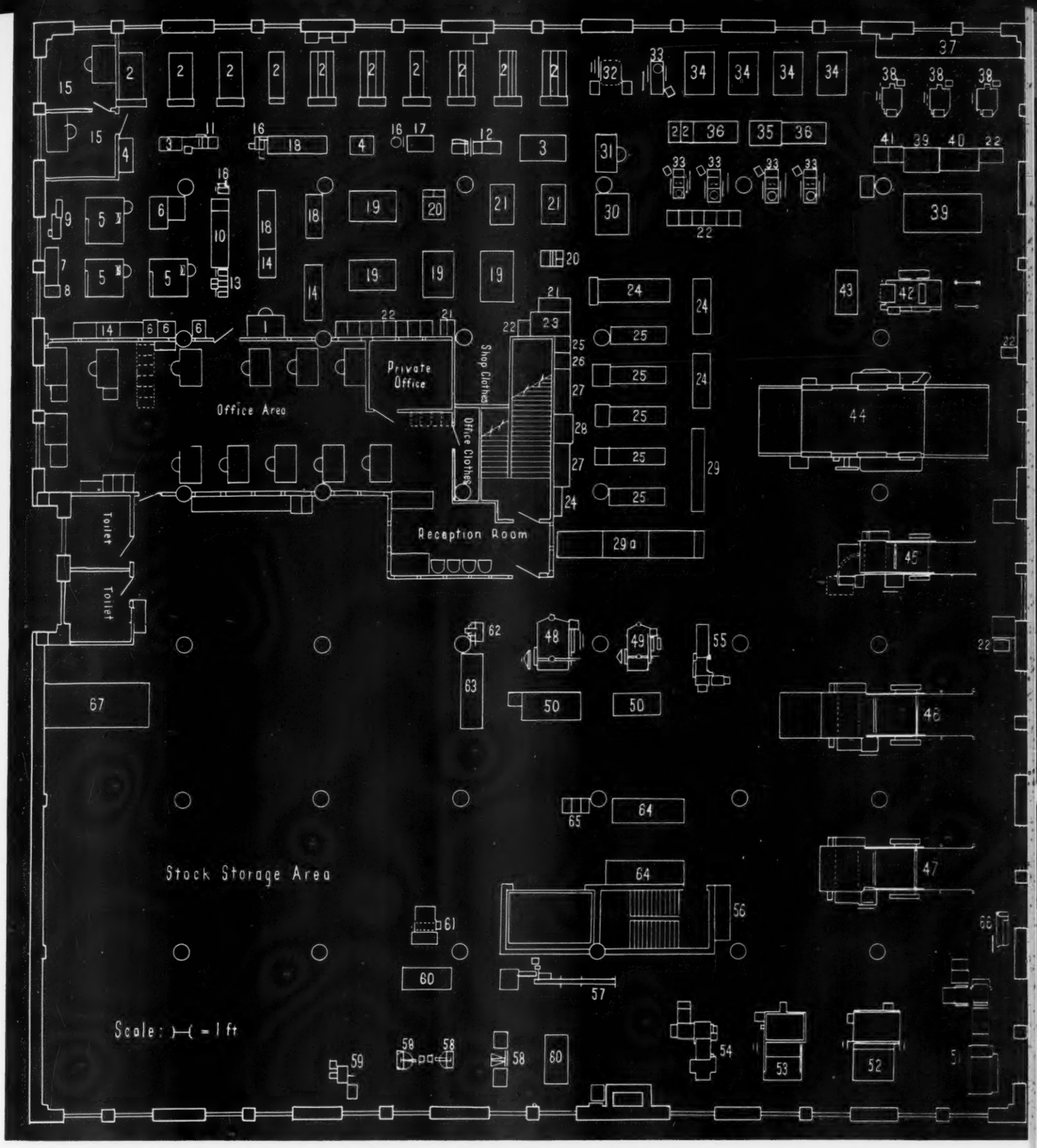
31—Foreman's Desk
32—Colt's Armory Press
33—10x15 Hand-fed Presses
34—10x15 Kluge Units
35—52x40 Stone
36—Drying Rack and Stock Table
37—Stock Table—19 ft. 6 in. by 3 ft.
38—Miehle Vertical Presses
39—Stock Table—41x59
40—Vertical Stone—39x63
41—Roller Storage Cabinets

Cylinder Pressroom

42—No. 1 Kelly Press
43—Kelly Stock Table
44—25x38 Miller Major Press
45—No. 4-4R Miehle Press
46—No. 2-0 Miehle Press with Feeder and Delivery
47—No. 2-0 Miehle Press

Bindery

48—Seybold 50 in. Paper Cutter
49—Seybold 34½ in. Paper Cutter
50—Cutter Tables
51—Cleveland Model M Folder with Feeder
52—42x58 Dexter Folder
53—36x48 Dexter Folder
54—Cleveland Model O Folder
55—Cleveland Model W Folder
56—Folder Accessories Cabinet
57—Rosback 4-station Stitcher
58—Stitcher with Stock Trucks
59—Smythe Sewing Machine
60—Bindery Tables
61—Monitor Pinhole Perforator
62—Paper Drill
63—Padding Table—10 ft. by 3 ft.
64—Shipping Tables
65—Mail Bags
66—Bundling Press
67—Steel Stock Shelving



A striking feature of the plant is its lighting. Windows are continuous on the west, north and east sides. Supplementing the natural light, 127 fluorescent lights unite in streamlined arrangement, localizing light wherever individual needs of the craftsmen require it. In addition, all walls and the ceiling are painted white to accentuate visibility. All equipment is painted olive green.

Approximately 4000 sq. ft. of paper storage space is adequate for all present requirements with a margin of space available should it ever be necessary to add more equipment beyond that which is now in operation.

The offices are finished in knotty pine, are air conditioned, and are completely equipped with new furniture and fluorescent lighting fixtures.

New equipment was installed under the $30,000 budget which Mr. Lund set for the transition from the old plant to the new. (That budget, by the way, now has been exceeded, as Mr. Lund found more equipment he believed necessary for efficient operation than was anticipated in the original budget.)

Among the new equipment items are a new Miehle vertical, a 10x15 Kluge, a No. 4 Rosback staple pony gang stitcher, No. 4 Vandercook proof press, Hamilton steel imposing table with galleys, 38 Hamilton galley storage cabinets with a total capacity of 3800 galleys for storage purposes only, 4 roller wash racks, a number of Hamilton steel chase racks, a section of 4 Hamilton steel customers' cut storage cabinets with 288 separate compartments, Style E Challenge Machinery Co. paper drill with slotting and round corner attachments, Anderson upright stock trucks, Hamilton galley transfer trucks, and 5 new ATF non-offset guns with central compressor.

Other added equipment includes a Miller major press, and a Model M Cleveland folder.

GUIDE *for the Selection of Lubricants for Ball Bearings as Prepared by the Annular Bearing Engineers' Committee**

*H. O. Smith, Secretary, Room 2825, 60 East 42nd St., New York, N. Y.

Section I—Greases

FULLY appreciating the many problems faced by ball bearing users in obtaining suitable greases for relubricating ball bearings, the Annular Bearing Engineers' Committee has been undertaking over a period of several years a research program from a chemical and mechanical standpoint to obtain a solution. For years there were many greases available, but these were chiefly of lime soap bases which had limitations. Due to the troubles experienced by the Ball Bearing Industry, a cooperative effort was made, and as a result, much better greases are now available.

The standards which follow have been developed from practical experience and careful analysis by the Annular Bearing Engineers' Committee, but it may become desirable to revise these occasionally to keep abreast of the continual development in the lubricant field. The user will appreciate that some lubricants which conform to these standards may not be suitable for all applications. It should also be appreciated that some greases which do not conform may sometimes be satisfactory. For all applications, the user of the bearing is advised to obtain the approval of the grease manufacturers.

The A.B.E.C. has developed a grease testing machine for determining the physical characteristics of greases and a number of the properties called for in these standards are determined with this machine.

GREASES FOR RELUBRICATION OF BALL BEARINGS

Operating Temperature Range	SPEED FACTOR (BEARING BORE IN MM. X RPM OF SHAFT)			
	Up to 75,000	75,000 to 150,000	150,000 to 300,000	300,000 to 450,000
	GREASE	GREASE	GREASE	GREASE
−50°F. to +125°F.	No Recommendation	No Recommendation	No Recommendation	No Recommendation
−10°F. to +125°F.	ABEC-II[1]	ABEC-I	ABEC-I	No Recommendation
32°F. to 150°F.	ABEC-II	ABEC-I	ABEC-I	No Recommendation
60°F. to 200°F.	ABEC-II	ABEC-I	No Recommendation	No Recommendation
OVER 200°F.	No Recommendation	No Recommendation	No Recommendation	No Recommendation

For excessive moisture conditions, a water repellent grease may be required.
[2]ABEC-I may be preferred for some applications.

Lubrication of Anti-Friction Bearings With Oil

The friction torque in a ball bearing lubricated with oil consists essentially of two components. One of these is a function of the bearing design and the load imposed on the bearing and the other is a function of the viscosity and quantity of the oil and the speed of the bearing.

It has been found that the friction torque in a bearing is lowest with a very small quantity of oil, just sufficient to form a thin film over the contacting surfaces, and that the friction will increase with greater quantity and with higher viscosity of the oil. With more oil than just enough to make a film, the friction torque will also increase with the speed.

The energy loss in a bearing is proportional to the product of torque and speed, and this energy loss will be dissipated as heat and cause a rise in the temperature of the bearing and its housing. This temperature rise will be checked by radiation, convection and conduction of the heat generated to an extent depending upon the construction of the housing and the influence of the surrounding atmosphere. The rise in temperature, due to operation of the bearing, will result in a decrease in viscosity of the oil and, therefore, a decrease in friction torque compared with the friction of starting, but soon a balanced condition will be reached.

With so many factors influencing the friction torque, energy loss and temperature rise in a bearing lubricated with oil, it is evidently not possible to give definite recommendations for selection of oil for all bearing applications, but two general considerations are dominant:

1. The desire to reduce friction to a minimum, which requires a small quantity of oil of low viscosity.
2. The desire to maintain lubrication safely without much regard for friction losses, which results in using larger quantities of oil and usually of somewhat greater viscosity in order to reduce losses from evaporation or leakage.

This second condition is most frequently met and in view of the broad outline of lubrication with oil made above, the accompanying chart has been made up for selection of viscosities of oil for various operating conditions.

The operating speeds (RPM) are given on one coordinate of the diagram and the bearing loads in lbs. on the other, both to a logarithmic scale. The lines intersecting the coordinates indicate viscosity groups for oils that are preferred for these loads and speeds. When ambient temperatures are low the lower viscosity ranges should be used and with high operating temperatures the higher viscosities should be selected.

When bearings have to operate in a wide range of temperatures, an oil that has the least changes with change in

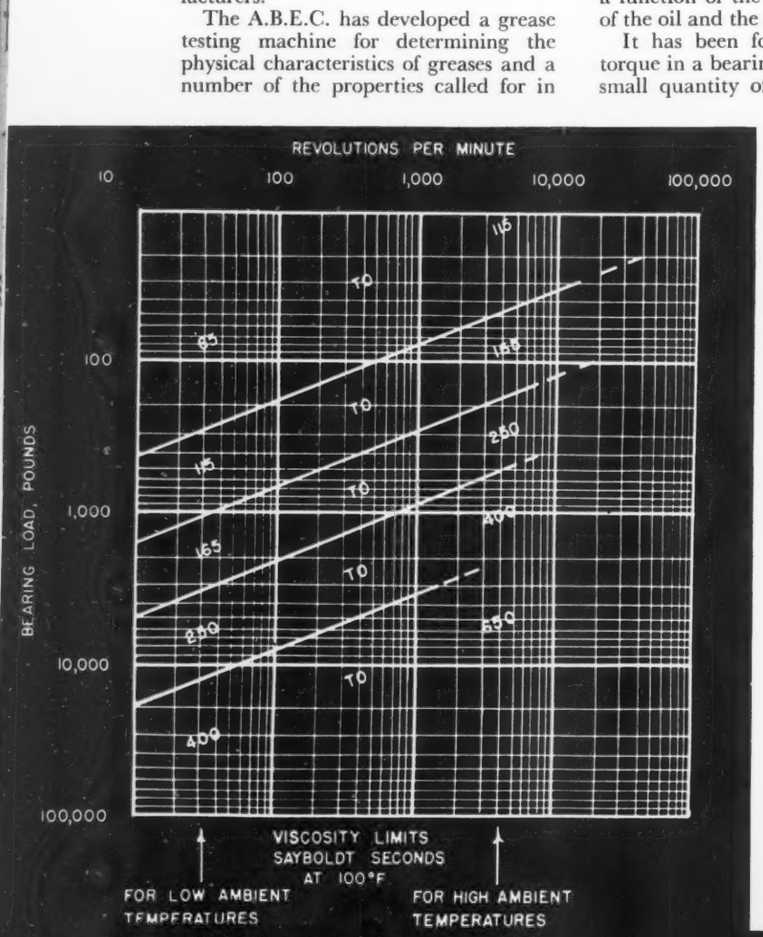


Chart made up by Annular Bearing Engineers' Committee for selection of viscosities of oil suitable for various operating conditions of anti-friction ball bearings. Operating speeds (r.p.m.) are given on one coordinate and the bearing loads in lbs. on the other, both to a logarithmic scale. Lines intersecting coordinates indicate viscosity groups for oils preferred for these loads and speeds.

ABEC Grease Standard

ABEC I. (Type of grease recommended for speeds and temperatures as indicated in Guide for Relubricating Ball Bearings.)
Greases shall be free from dirt, abrasive matter, fillers, excessive amounts of moisture and free acid or free alkali.

Nature of soap	Soda or soda lime; maximum lime soap 5% of total weight of grease; uncombined lime 0.10% max.
Worked Penetration, A.S.T.M.	190 min.
Running Torque, A.B.E.C. Test	60-300 gm. cm.
Leakage,	
Through plate seal	5% max.
Left in bearing	75% min.
Oxidation	(See details below)

ABEC II. (General purpose greases, suitable for grease gun applications, for modern speeds and temperatures as indicated in Guide for Relubricating Ball Bearings.)
Greases shall be free from dirt, abrasive matter, fillers, excessive amounts of moisture and free acid or free alkali.

Nature of soap	Soda or soda lime; maximum lime soap 5% of total weight of grease; uncombined lime 0.10% max.
Worked Penetration, A.S.T.M.	260 min.
Running Torque, A.B.E.C. Test	60-450 gm. cm.
Leakage,	
Through plate seal	20% max.
Left in bearing	75% min.
Oxidation	(See details below)

Oxidation: Greases shall show no evidence of deterioration following 18 months storage in bearings in individual sealed boxes or packages as indicated by oil leakage, hardening, or gum formation of the grease, or by loss of free turning by hand. Alternatively, the grease shall show no change in consistency, drop point, or neutralization within the limits defined below[1], nor more than 5 lbs. drop in oxygen pressure following a 100-hour run in Norma-Hoffmann oxidation bomb at 210°F. and 110 lbs. initial oxygen pressure, using a 20-gram sample on standard glass sample dishes. When tested under the same conditions with the addition of a piece of sheet copper partially immersed in the sample, there shall be no evidence of stain or corrosion of the copper strip, nor any evidence of physical change in the grease after six hours of exposure.

[1] Consistency ASTM penetration or equivalent and drop point Shell Ubbelohde shall not increase or decrease more than 10%.
Neutralization numbers made on grease samples before and after 100-hour accelerated oxidation, or 18 months' storage test, must not show a total change of more than the equivalent of 10 mg. of KOH per gram of grease, nor shall the neutralization number following 100 hours oxidation show acidity exceeding the equivalent of 5 mg. of KOH per gram of grease.

temperature, *i.e.*, an oil with high viscosity index, should be selected.

In the great majority of applications pure mineral oils are most satisfactory, but they should, of course, be free from contamination that may cause wear in the bearing, and they should show high resistance to oxidation, gumming and to deterioration by evaporation of light distillates and they must not cause corrosion of any parts of the bearing while it is standing or during its operation.

It is self-evident that for very low starting temperatures an oil must be selected that has sufficiently low pour-point, so that the bearing will not be locked by oil frozen solid.

In special applications, various compounded oils may be preferred, and in such cases the recommendation of the lubricant manufacturer should be obtained.

Seeks Substitute Materials for Metals Wrappings

THE printing industry is familiar with products and activities of the Reynolds Metals Company. Packaging in its various forms has constituted the largest part of the company's business. It is in this division that the company is working on substitute materials to retain its business.

In its February 27 issue, the *Daily Metal Trade* carried an article to the effect that if, as now appears probable, the use of metal foil is banned on April 1, except where priorities permit its use, Reynolds Metals Company will suffer in the largest individual division of its business.

"The present status of foil and cellophane for packaging cigarettes" continues the story, "is that the present plan is to permit the use of cellophane when foil is not available. Since tin and lead will not be provided to roll into foil, it now appears that the metal wrapping will be eliminated.

"Reynolds, some years ago, pioneered in and developed to considerable proportions the use of metal covered paper labels. For some time now it has not been possible to use the metal and these labels have been printed on paper alone.

"The machinery used to roll the metal into foil thickness and to print the metal is not adaptable for defense goods production and can be used only if substitute materials can be found.

"Recently, Reynolds developed a new packaging material consisting of two sheets of paper with a foil center and an asphalt binder. This it is believed would be useful in packaging foods for the army and would carry a priority for the use of the necessary metals."

EMPLOYMENT
AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

LOCATION WANTED — For small but complete engraving plant together with an all-around photo-engraver. Would set up same in a newspaper plant. Reply Box 147.

POSITION WANTED — By expert lineup and stoneman, capable of taking care of press OK and relieving foreman of all pressroom troubles, offset or letterpress. Good habits, best of references. Reply Box 146.

Matrix Conservation Booklet

The first in a series of booklets published under the general title *Linotype Life Extension* has been announced by Mergenthaler Linotype Company. Title of the book is *The Care and Maintenance of Matrices*. The booklet is 6 in. by 9 in. and is well illustrated. Instructions are given for maintaining various adjustments in order to conserve matrix wear so the user will secure maximum service from matrices. Ordinary matrix repair and maintenance operations are discussed. An important contribution to technical literature for conservation of matrices.

Paper Standardization Bulletin

The Central Ohio Paper Company has published in bulletin form, 9 pages, the *Wartime Paper Manufacturing Restrictions* issued by Norbert A. McKenna, Chief of the Pulp and Paper Branch of WPB. This program at present is purely a voluntary one and the Industry has been asked to operate under the plan for a number of weeks to determine whether or not compliance will cause any undue hardships. At the end of the test period the simplification program will be reviewed on the basis of experience and if satisfactory a mandatory directive is likely to be issued. Included in the program are book papers for commercial advertising and printing; fine papers for commercial advertising and printing field and of blueprint and direct linen papers; vegetable parchment; gummed sealing tape; butchers' papers; kraft wrapping paper; grocery bags and sacks and wrapping tissue.

Book Plates *by the Million Expected to be Scrapped as Result of Pending WPB Order — Printing and Publishing Chief warns all who can to begin manufacture of Some War Necessity*

IN AN address delivered before the Graphic Arts Association of Illinois at Chicago in February, Chief Industrial Consultant E. W. Palmer of WPB's Printing and Publishing Branch, Washington, D. C., stated that plates from which books have been printed within the last several years must be scrapped and sent to the smelters to speed the war effort.

It is expected that millions of plates will be scrapped under a pending WPB order. From such plates inexpensive second editions of popular books have been printed.

Mr. Palmer stated that mandatory inventories by all publishers will be required by a pending WPB order which will have all the weight and impact of law. The useful life of plates is set at five years unless they have been printed from within that period.

It has been customary for all publishers to enter into contract agreements through which authors are permitted to buy plates at cost after a specified time. Incorporated in the new WPB order will be a provision requiring authors to buy the plates within four months after the inventory or relinquish their rights. There will be an "escape clause" through which publishers may save certain plates.

The new order was requested by certain publishers. Mr. Palmer stated that one publisher has 22,000 sets of plates in his company's warehouses, representing 22,000 books and from five to six million individual plates.

The speaker warned his audience that all who can do so should begin manufacturing some war necessity in their plants to avoid Government conversion. He also stated that keeping more than a 90-day supply of processing materials or a 60-day supply of operating materials constitutes hoarding. Those who keep more than the minimum amounts are inviting the government to step in and take away their supplies.

Conservation Program

for Production — Initiated by Crowell-Collier Publishing Company reported Upon by President Thomas H. Beck

PRINTERS and publishers, in common with many other industries are becoming more and more conservation minded in response to Government's requests for voluntary cooperation to conserve critical and near-scarce materials for winning the war. While no figures are available as yet which would show the extent to which the printing and publishing industry has been cooperating it is apparent that most companies are cooperating voluntarily without the necessity for mandatory pressure by Government.

One of the first of the large publishing companies, if not the first, to announce what it has done to put into effect a voluntary economy program is The Crowell-Collier Publishing Company. The company's main offices are in New York and its big printing plant is in Springfield, Ohio.

Under date of February 13, President Thomas H. Beck has sent a letter (typed on two sides of the sheet for economy) to many companies and individuals whom he feels should be apprised of the company's program for cooperation and economy during the war period.

Abstracts taken from the 10-point program are given here. Most of the economies, of course, bear directly upon the paper problem, machine operation, efficient plant management, fuel consumption, metal reclamation, use of welding and hot metal spraying equipment for repair of equipment and reduction in use of wire stitching.

(1) Lighter weights of paper for magazines, made possible by the company's improved manufacturing technique and the manufacturing strides made by paper suppliers. Today, manufacturers are making lighter weight paper with better surfaces and more opacity (even though the whiteness of the paper has been somewhat hurt by Governmental restrictions in the use of chlorine).

(2) Maximum press speeds (over 60,000 twelve-page signatures in color per hour); minimum press stoppages; flying pasters for roll changes; no press makeready. "These economies are made possible," states Mr. Beck, "by our previous tremendous expansion in gravure and help to offset the costs that we, in common with all manufacturers, have had to assume."

(3) Minimum man hours on all work through efficient plant management, the result of a complete study by engineers initiated three years ago.

(4) Minimum fuel consumption for drying, made possible through gravure expansion in which the drying is by evaporation rather than by heat.

(5) Reclaiming in the company's own smelters all copper used on gravure printing cylinders and in letterpress plates.

(6) Similarly reclaiming nickel.

(7) Oxyacetaline cutting and welding is employed for equipment maintenance and repair to lessen purchase of new parts or parts now difficult to obtain.

(8) Hot metal spraying for the same purpose.

(9) Careful reduction in paper waste, especially core waste through the use of true cores, and the elimination of paste for fastening paper to the core.

(10) Reduction of wire stitches in binding publications from three to two, to save essential steel wire.

In the letter addressed to advertising agencies, Mr. Beck states that "with your cooperation we can . . . cut waste further by reducing the consumption of paper in our sales promotion pieces, direct mail and all other printed matter used to sell advertising space."

Continuing the president's letter, it is stated: "Our program includes elimination of cardboard stiffeners in mailing; restriction wherever possible in the physical size of promotion pieces and direct mail; the use of lighter weight paper stock and the limitation of mailings to those pieces which carry a message of exceptional importance.

"As a further measure, we also are eliminating the use of stiffeners in the regular mailings of complimentary copies of our magazines to advertisers and agents. We hope you will overlook an occasional instance where complimentary copies and direct mail pieces reach you in less than perfect condition."

---

23 Books Monotype-set

It has been announced by Lanston Monotype Machine Company that the text matter of twenty-three of the books finally selected for the Fifty Books exhibition was set on the Monotype. Of these twenty-three Monotype-set books, six were composed in various interpretations of Caslon, five were set in Baskerville, three in Jenson, two in Bembo, and one each in Bulmer, Cochin, Deepdene, Emerson, Garamont, Poliphilus and Schwabacher.

Henry Watson Kent served as chairman of the selecting committees. The sales prices of the selected books ranged from $1 to $36 per copy.

ALL-OUT VICTORY PRODUCTION IN COTTRELL PLANTS

The Cottrell organization is proud to have an important part in making machine tools for the Victory program. Machine tools are the fundamental weapons of this war. Our country must have enormous numbers of planes and tanks and all the other accouterments of modern warfare. That means mass production, and mass production is wholly dependent upon machine tools.

In making machine tools, precision is the first essential; and precision has always been an outstanding characteristic of Cottrell manufacturing.

Equally important, today, is speed. Time lost can never be regained. In the present world situation, time lost means more men killed. That is why Victory production must come first and does come first in Cottrell plants.

Frankly, we can offer no assurance of new Cottrell presses until the present emergency is past. However, repair parts will be obtainable, as long as materials for them can be had; engineering counsel and help in solving production problems will be available; and research with a view to still better Cottrell presses in the future will be continued.

Cottrell customers and prospective customers have shown sympathetic understanding of the present manufacturing situation. Your continued patience and cooperation will be appreciated.

C.B. COTTRELL & SONS CO., Westerly, R.I. • New York: 25 W. 26th St. • Chicago: Daily News Building
Claybourn Div.: 3713 N. Humboldt Ave., Milwaukee • Smyth-Horne, Ltd., Gray's Inn Rd., London, E.C.1

MAGAZINE AND MULTI-COLOR PRESSES

Grand Rapids is Getting Ready

PLANS for the 1942 Convention of the International Association of Printing House Craftsmen were pretty well determined at a meeting of convention chairmen in Grand Rapids, Mich. on January 30. The convention is being held in Grand Rapids, Michigan, August 9, 10, 11 and 12 with headquarters at the Hotel Pantlind. L. V. (Bud) Mulnix, jr., is general convention chairman; Herman Verseput is educational chairman; Jack Beierwaltes is publicity chairman. Douglas C. McMurtrie met with the group.

Much emphasis is being placed by the educational committee on the technical aspects of printing under current and future conditions. The convention itself will be highly clinicized, and will be presided over by top men in the field covered by each clinic. Clinics included are New Materials and Processes under War Economy, Typography and Design, Offset Platemaking and Printing, Production Management and Engineering, Letterpress Presswork, and Club Management.

Entertainment Chairman Len Verseput and Mrs. Lester Mathews, Ladies' Entertainment Chairman are planning good times for Craftsmen and their wives attending the International Association of Printing House Craftsmen convention in Grand Rapids, Mich., August 9, 10, 11 and 12.

Correction

Because of a typographical error, the speed range of the Miehle 46 Single color press was given as 1500 to 2000 i.p.h. in the article *Big Cylinder Press Improvement* appearing on page 32 of the February *Printing Equipment Engineer*.

We are advised by Miehle Printing Press & Mfg. Co. that the speed range of the No. 46 Single Color Press is from 1500 to 2800 impressions per hour. We are glad to print the correction.

Modernization Program of Racine (Wis.) *Journal-Times* Continued by Installation of Complete Engraving Plant—Another step in the expansion and improvement program of the Racine (Wis.) *Journal-Times* has been taken with the addition of a modern engraving plant. Latest equipment, designed to provide the best possible service to advertisers and to permit a wider use of cuts for news and feature purposes, has been obtained by The Racine Journal-Times company, according to Business Manager Harry R. LePoidevin.

In no sense of the word, Mr. LePoidevin explained, can the new equipment be described as a "one-man engraving plant." Executives of the *Journal-Times*, Mr. LePoidevin disclosed, took elaborate pains to make an exhaustive investigation of its needs and then proceeded to obtain modern equipment for producing high quality engravings.

The plant covers an area 40 ft. by 40 ft. in the basement of the *Journal-Times*. Equipment includes a Robertson camera and diaphragm control. The dark room is fitted with a refrigerated sink that keeps chemicals at the proper temperature at all times. The sink, manufactured by the Douthitt Corporation, is supplied with a refrigerated storage cabinet for chemicals.

Double arc printing lamps, manufactured by the Joseph Gelb company, of New York, are used both with the camera and the 24 in. by 30 in. vacuum printing frame, constructed by the National Steel & Copper Plate Co.

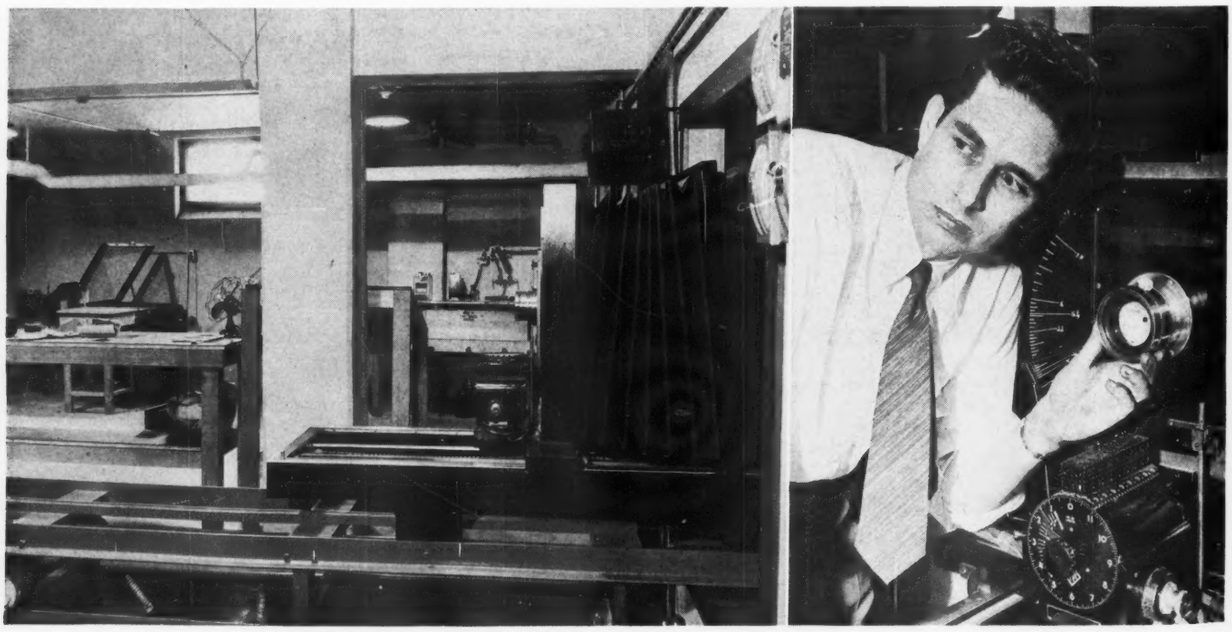
A Master Etcher has been installed. An air vent carries off the acid fumes and an air duct runs over the dusting cabinet to draw off excess dusting powder. The air duct also provides ventilation for the dark room.

All other equipment in the engraving room is new with the exception of a Hacker hand press, a Wesel router and a saw.

The construction of an engraving plant by the *Journal-Times* follows closely on the heels of the complete revamping and modernization of the composing room in keeping with the company program to make its newspaper production equipment as up-to-date as possible.

Extensive equipment additions and production layout changes effected by the *Journal-Times* in its composing room and stereotype departments were illustrated and described in the November 1941 issue of *Printing Equipment Engineer*. On account of its economical straightline operation, the composing room workflow diagram published in connection with the article was the subject of favorable reader comment, according to Superintendent Talford Jude.

Frank R. Starbuck is editor and publisher of the *Journal-Times*. Harry R. LePoidevin is business manager. Talford Jude is superintendent of the composing room, and LeRoy Tucker is the engraver.



'Linotype LIFE EXTENSION'

Conservation of present equipment has become an economic necessity. Knowledge of machine construction and proper maintenance methods are increasingly important.

Linotype continues its 56-year tradition of extra service to the industry with the "Linotype Life Extension" series of booklets. These give authoritative information on the efficient maintenance of matrices and mechanisms. The first is just off the press, *The Care and Maintenance of Matrices*. If you have not received your copy, ask your Linotype representative or write to your Linotype Agency for it.

TRADE LINOTYPE MARK

Linotype Memphis Bold

In somewhat reduced form we are showing the design for the top of a Christmas greeting designed and made by Composing Room Foreman Carleton Berry of the Columbus (O.) Dispatch. *This type picture is a combination of Monotype rules, borders and ornaments sawed to length and mitered on a Rouse Mitering Machine. Other examples of Mr. Berry's ingenious designs prepared with rule and border material and a Rouse Mitering Machine have appeared in previous issues of* Printing Equipment Engineer. *The original of this type picture was 8¼ in. wide by 4½ in. deep.*

Northwest Conference

for Newspaper Mechanical Executives is Now a Reality

—Nearly 300 Attend Minneapolis-St. Paul Organization Meeting

By STAFF WRITER

THE first annual Northwest Mechanical conference, held in Minneapolis and St. Paul, February 14 and 15, attracted an attendance of nearly 300 mechanical department executives of newspapers and commercial printing plants from five states comprising Minnesota, North and South Dakota, Northern Michigan, and Wisconsin. Visitors from a number of other states were present.

The sessions opened with a general assembly in Hotel Radisson, Minneapolis on the morning of February 14, with Roy Palmer, Executive Secretary of the Northwest Daily Press association, presiding. Following the invocation by Joe Hicks of the St. Cloud (Minn.) *Times*, B. H. Ridder, Publisher of the St. Paul *Dispatch-Pioneer Press*, gave the address of welcome. The response was given by C. J. Hunt, President of the Northwest Daily Press association.

Following this general assembly, the conference was divided into clinics on Engraving, Line-casting Machine, Composing Room and a combined clinic on Stereotyping and Presswork.

Engraving Clinic

In charge of the Engraving clinic was D. D. Curriden, Minneapolis *Star-Journal* and *Tribune* engraving foreman, assisted by A. W. Irber, *Dispatch-Pioneer Press* and Ernest Sherer, Minneapolis *Daily Times*. Special problems of engraving were discussed by Mechanical Superintendent Eric Ridder, of the *Dispatch-Pioneer Press*. More than 40 attended the Engraving clinic and viewed a display of newspaper illustration production, including retouching of photographs, photography and etching. The Rolup method of etching halftones came in for considerable discussion with respect to deeper etch, greater tonal value, cleanness and reduction in time of between 35 to 40% over conventional method.

A new process for retouching certain photographs where it is desired to have some portions especially sharp and other areas particularly soft, was explained by E. G. Carlson of Harold M. Pitman Co., Chicago. In this method, he said a solution is poured over the photograph. This solution dries quickly and adheres to the print. Then, with a sharp knife, the areas which it is desired appear sharp and clear are outlined and the solution is stripped off, leaving part of the photograph softly masked and the rest clearly distinct.

The Northwest Mechanical conference at Minneapolis February 14 and 15 wasn't all work, but there was enough work so that this group appreciated time out at the speakers' table for a bit of lightweight conversation. Left to right: Tom DePoy, Linotype Corporation, who presided over the afternoon session February 14; George Ortleb, former Deputy U. S. Public Printer, who talked on type metals; Walter Schulte, Federated Metals Co.; George Curle, of the Minneapolis Daily Times, *1942 President of the Conference, and H. E. Magnus, of the Little Press, conference Secretary.*

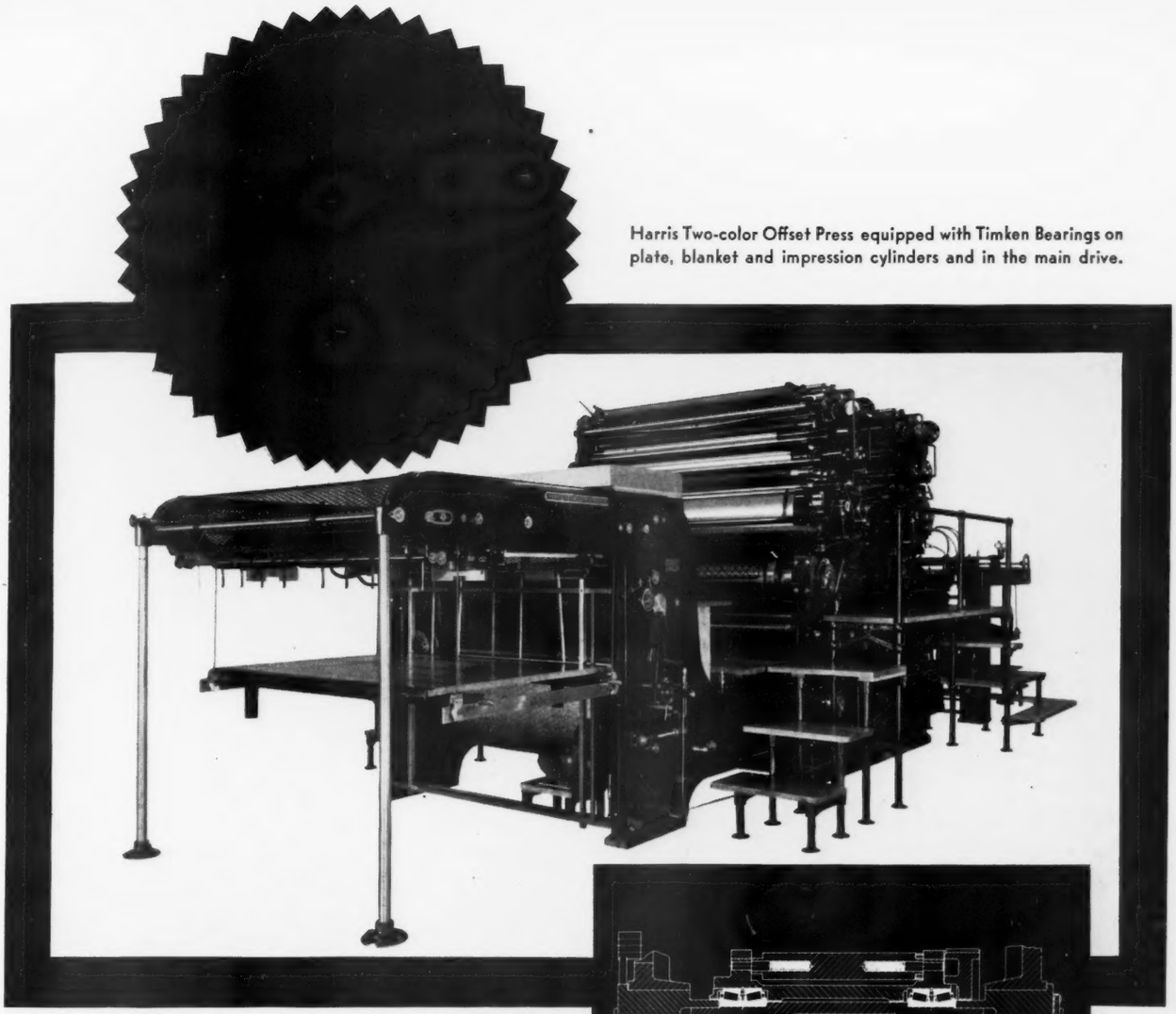
Pressroom—Stereotyping Clinic

During the Pressroom - Stereotyping clinic considerable discussion occurred on the elimination of bubbles in the casting box. Andrew Jose, Stereotype Superintendent of the Des Moines *Register-Tribune*, talked on the subject. He emphasized the part which water and metal temperatures play. The Minnesota & Ontario Paper Co. presented a film on the manufacture of paper. Discussion leaders were Lawrence Kameran, Stereotyper of the *Dispatch-Pioneer Press* and Pressroom Foreman J. G. Allen of the *Star Journal* and *Tribune*. Robert Longmore, Chicago *Tribune* Stereotype superintendent, gave a talk on stereotyping.

Machinists' Clinic

The Line-casting clinic was led by Chief Machinist J. J. Cory of the *Dispatch-Pioneer Press*. A treat in pictures of typesetting machines from 1822 to 1942 was displayed and discussed by V. G. Eck, Dunwoody Institute, Minneapolis. Assisting Mr. Cory, in addition to Mr. Eck, were G. W. Wraggett, Chief Machinist, *Star-Journal* and *Tribune* and Joseph Staublitz, Chief Machinist of the West Publishing Co., St. Paul. Loose plungers, oil seepage from mold wipers, "stuck" slugs and many other problems were threshed out in a question and answer period. Solution for the worn plunger difficulty seemed to be to replace the plunger whenever slugs of unsatisfactory solidity are cast or when there is play of 0.006 in. or more between plunger and well wall. Many cures for oil contaminated matrices were suggested. Among them are Hoppe's No. 9 solvent, stick

(*Continued on Page 36*)

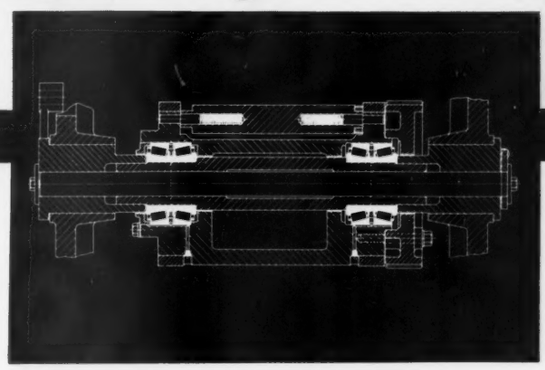


Harris Two-color Offset Press equipped with Timken Bearings on plate, blanket and impression cylinders and in the main drive.

Requirements of the National Victory Program have increased printing volume considerably, but this cannot be expected to last indefinitely. Existing presses and auxiliary machines—many equipped with Timken Tapered Roller Bearings—are doing an excellent job now—but will they have the speed, precision and economy to assure profits for their operators when conditions are not so favorable?

Printing equipment manufacturers and users must answer this question and proceed accordingly. One thing is certain however: Timken Bearings will improve the performance of any machine—the more the better.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO



Application of Timken Bearings to plate and impression cylinders of the Harris Two-color Offset Press.

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

Manufacturers of Timken Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; Timken Alloy Steels and Carbon and Alloy Seamless Tubing; and Timken Rock Bits.

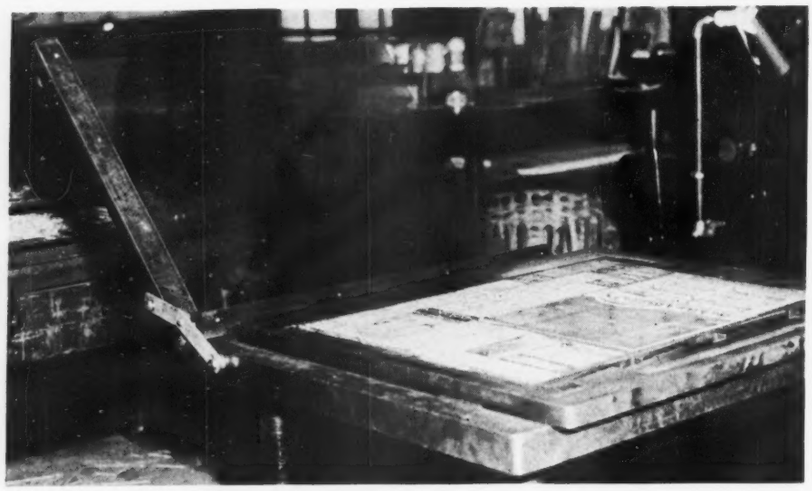


Fig. 1—View of advertising color plate registering device used in plant of the Charlotte (N.C.) News. The hinged right-angle section was provided by cutting two sides from a discarded stereotype chase. The black plate (in the form) is placed on the truck. The plate is then inked with metallic ink. The transparent celluloid sheet supported by the right-angle hinged section of the old chase is then lowered over the form and a "proof" is taken by planer and mallet to transfer the plate image to the transparent sheet.

The color plate is then substituted for the black plate. This is accomplished by lowering the transparent celluloid transfer sheet into contact with the color plate. (As is stated above, the ink is quick drying.) The color plate is moved by hand into register with the previously taken proof of the black plate on the transparent sheet, after which the color plate is tacked to its base. The form is now ready for molding.

Spot Color in Charlotte (N. C.) News provided by simple plate registering device, press compensating rollers and portable fountain

By C. B. CAPPS*

*Mechanical-Superintendent, Charlotte *News*, Charlotte, N. C.

A GREAT many newspapers can now give spot color to advertisers. Many smaller papers could and would offer this service if a practical and simple method could be evolved. It was with this thought in mind that we approached the subject. Our first color work was done under the hardships that naturally befall a paper without color equipment. However, to give advertising department representatives something they can sell at a profit, something more than this quality of work with its restrictions and expense is entailed.

We have worked out an operation that permits us to offer one color plus black on any page in the paper at a negligible increase in cost and with what we consider splendid results.

For registering the color plates in the form in the composing room, we took an old chase and sawed off an end and side section to provide a right-angle bar. We then bought two hinges, drilled and tapped holes in the side of the bed of a form truck and in one side of the sawed-off chase. The hinges were attached so that the two sides of the chase would be flush on top and side with the truck. Eight holes for small size screws were then drilled and tapped in the top of the right-angle chase bar section. Eight corresponding holes were then drilled in two steel strips, 1 in. wide by 1/16 in. thick.

Between the upper surface of the right-angle chase bar and the two strips of metal, we mounted a sheet of transparent celluloid, using strips of stereotype mat on each side of the transparent material to prevent it tearing easily and to bring it up to type high.

An elbow support, as shown in Fig. 1 was then made to hold the "lid" up in position out of the way while working on the form. A handle was added to the chase bar to facilitate raising and lowering the lidded frame.

Registering the Plates

After the black plate is positioned in the form and tacked down on the base, the printing face of the plate is covered with a coating of metallic ink. This quick drying ink is used in commercial plants for printing on cellophane. The registering device is then lowered into position. The chase holding the form is shoved tightly against top and side bars of the registering device. A proof is then beaten in by hand to transfer the image to the underside of the transparent sheet.

After a stereotype mat is molded from the black plate it is a simple matter to remove the black plate from the form and then place the color plate on the base in the form in its stead, making sure that the chase containing the color plate is again shoved tightly against the top and side extensions of the hinged right-angle chase section which supports the transparent sheet on the underside of which you have transferred the black page image. Now move the color plate in exact position by comparing the plate with the black plate "proof" on the underside of the transparent sheet. After the correct register of the color plate has been determined, tack the plate down on the base, after which the color plate is ready for molding.

On the bed of the stereotypers' trimmer knife we have placed a gauge bar against which each mat is placed for trimming to assure the same length mat for each color.

All color mats are backed as nearly alike as possible, to aid in controlling the shrinkage of the two mats, the mats being cast from immediately after molding, backing and scorching. If you are lucky with the mat shrinkage, the plates are theoretically in register if the ring end of the casts are placed against the rings on the press.

CANCER CAN BE CURED!

This is the welcome message your dollar will bring to thousands of cancer sufferers in 1942. Help us carry on the fight.

Enlist in your local field army now.

Buy package labels today.

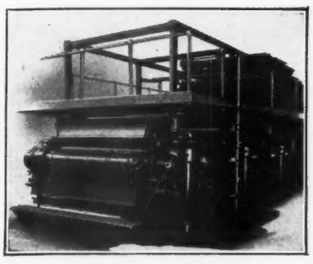
If you live in the Metropolitan Area, address the New York City Cancer Committee, 130 East 66th Street.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

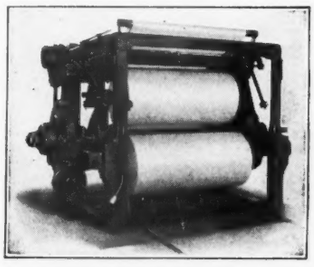
New York, New York

Yes, we are busy on war work

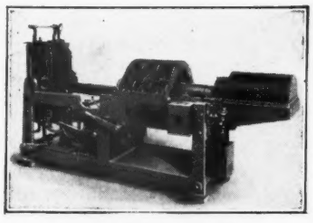
but we're not forgetting present and prospective users of Wood machinery



Wood Steel Press



Full-Automatic Autopaster



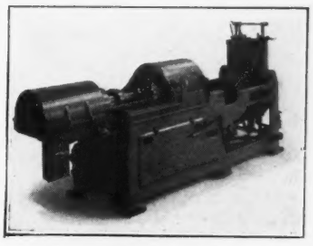
Standard Pony Autoplate

Wood Newspaper Machinery Corporation is proud to be doing its part in the making of war materials.

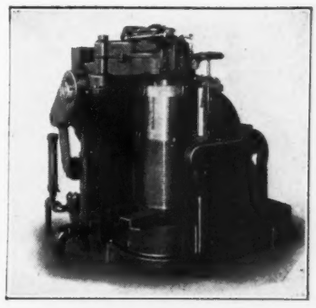
We are proud, too, that a lot of existing Wood machinery is doing good work for newspapers — especially in these times when newspapers are so important to the country's welfare.

As to present needs, we cannot offer much except rebuilt machinery and essential replacement parts . . . plus, of course, engineering service in connection with current production problems.

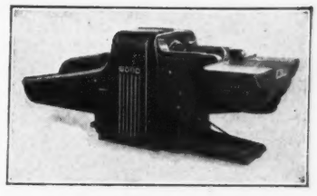
In the future, however, we shall be ready to serve you better than ever. There are no restrictions on plans for the post-war period when new developments and improved equipment will be badly needed.



Heavy-Duty Pony Autoplate



Automatic Autoplate



Heavy-Duty Autoshaver

WOOD NEWSPAPER MACHINERY CORPORATION

Plainfield, New Jersey • New York Office: 501 Fifth Avenue

WOOD NEWSPAPER MACHINERY

Wood Steel Press • Full-Speed Autopasters • Pony, Junior and Automatic Autoplates • Vacuum Casting Equipment (applicable to any Autoplate, old or new) • Standard and Heavy-Duty Autoshavers • Color Plate Pre-Registering Device

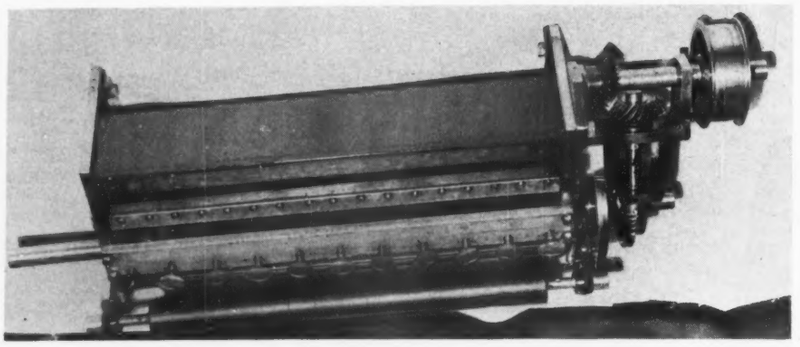


Fig. 2—In the accompanying article, Mechanical Superintendent Capps of the Charlotte (N.C.) News tells how Pressroom Foreman L. M. Phelps constructed this portable color ink fountain with which spot color is now offered to advertisers in the News. The fountain can be placed in position on any press unit in 4 or 5 min. It is fastened to the black fountain key rail by removing two black keys at each end of the color fountain and inserting cap screws through two brackets on the underside of the color fountain into the black key rail.

Compensating rollers were made from various overhead rollers on the press, with a home-made hand control for raising or lowering the roller, both as a unit and on the end, so as to give a horizontal as well as vertical control of the image between the press units.

The Fountain

The auxiliary color fountain, with the exception of the fountain cylinder and gears which were found lying about the plant, was designed and built by L. M. Phelps, pressroom foreman, from parts purchased from a local junk dealer.

The fountain functions from any point on our Duplex Metro-unit-type presses, being driven through a flat belt connection from a ductor roller as shown in illustration. It can be placed in position on any press unit in four or five minutes, as it fastens on the black fountain key rail by removing two black keys at each end of color fountain, and inserting cap screws of the same size through two brackets on the underside of the color fountain, into the black key rail. The color fountain ductor roller is an ordinary 20 in. job press roller on ½ in. core and shaft, and functions from a cam drive as is shown in Fig. 2, being pulled back against the fountain roller by two coil springs—one at either side of the bearing yoke. The blade controlling the ink feed was made from a saw blade.

The long drive shaft is provided to permit shifting the drive from one side of the press to the other by merely removing two cap screws in the drive plate and reinserting at the other end of the fountain; also, at this time the worm gear is removed from the fountain shaft and placed in position on the other end. The ductor cam position is not disturbed.

Another feature of this fountain is the saving of ink. There is very little space under the ink cylinder. Consequently, the fountain is of compact design and can be operated with less than one pound of ink in the ink trough.

The fountain can be completely dismantled in a few minutes for cleaning, although we have not found it necessary since little time is required to clean it without dismantling.

Specifications are as follows: Weight, 100 lbs.; length, 20 in. inking surface on fountain roller; overall length, 35 in.; width, 12½ in.; depth of reservoir, 4 in.; overall height, 8½ in.

The fountain really is wider than necessary as we had a suitable 20 in. fountain cylinder on hand and decided to use it rather than have an 18 in. cylinder made up.

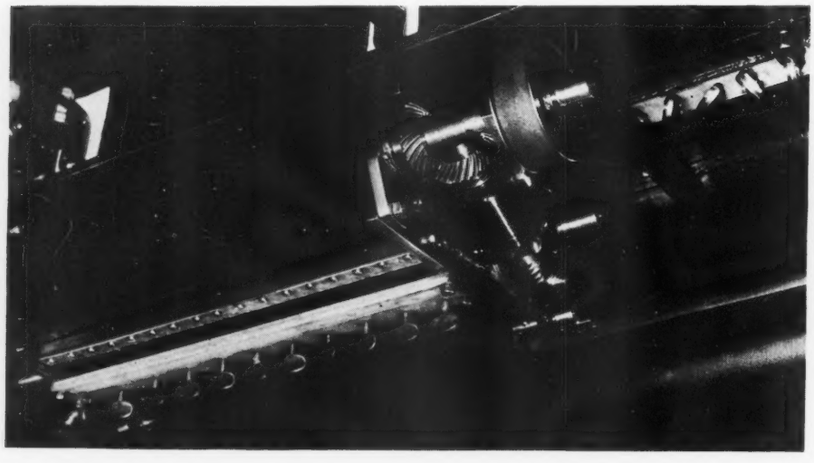


Fig. 3—View of the portable spot color ink fountain used in pressroom of the Charlotte (N. C.) News. The fountain is used on the News' Duplex Metro-unit-type presses. The fountain mechanism is driven by a flat belt connected to a ductor roller on the press.

EQUIPMENT
SALES

Recent Linotype Installations

The Chicago *News*, which ordered eight Master Model 31 Linotypes for use in producing the Chicago *Sun*, has since ordered five more Master Model 31s. One or more Linotypes have been installed by the Paterson (N.J.) *Evening News;* Grand Rapids (Mich.) *Press;* Firestone Tire and Rubber Company, Akron, Ohio; Roessler Brothers, Inc., Cincinnati; Salyersville (Ky.) *Independent;* Everett (Pa.) *Press;* Sanford S. Gooding, Lockport, N. Y.; Marietta (Ohio) *Daily Times;* Glendale (Calif.) *News-Press;* California State Printing Office, Sacramento; Corbin (Ky.) *Daily Tribune; Le Franco-American*, Waterville, Maine; Lambert Printing Company, Lowell, Mass.; *The News* and the *Chattahoochee Valley Times*, West Point, Ga.; Bristol (N.H.) *Enterprise;* Illinois Office Supply Company, Ottawa, Ill.; *Daily Racing Form*, Chicago; Charleston (W.Va.) *Daily Gazette;* Gardner (Mass.) *News;* Newport News (Va.) *Daily Press* and the *Times-Herald; Amerikanski Slovenec*, Chicago; New York Theatre Program Corporation, New York, N. Y.; Earl W. Kinner, Louisa, Ky.; Jesse M. Alverson, Jr. and Sr., Paris, Ky.; Pennland Printing Company, Philadelphia, Pa.; Memphis (Tenn.) *Daily News;* State Board of Education, Stamford, Conn.; Waverly (Ohio) *Watchman;* Hederman Brothers, Jackson, Miss.; Bee Publishing Company, Lawrence, Mass.; Eldorado (Ill.) *Daily Journal;* Lewiston (Maine) *Sun* and the *Journal;* Ludovy Dennik, Chicago; Acme Printing Company, Inc., Everett, Mass.; Salem (Ind.) *Democrat;* Kewanee (Ill.) *Mail-O-Graph;* Sydney (N.S.) *Post-Record.*

Three Plants Order 48 Linotypes

Twenty-seven Linotypes and many fonts of matrices have been added by the Baltimore *Sun* papers. 16 Linotypes and many fonts by the *Correio da Manha* of Rio de Janeiro, and five Linotypes and many fonts by the Louisville *Courier-Journal* and the *Times*. Twenty-five of the machines for the Baltimore *Sun* are Master Model 31s and two are Mixer Model 29s with six-mold disks. All are equipped with Margach metal feeders. Among the faces installed were 32 fonts of 7½ point Corona with Italic and Small Caps and 17 fonts of 6 point Ionic No. 5 with Bold Face No. 2. A number of display matrix fonts for head-letter and advertising composition use also were installed, including 29 extra magazines.

Forty-four Linotypes are now operated by the *Sun* papers. Louis F. Fries is Mechanical Superintendent, and William J. Hebner heads the composing room.

IPI Essay Contest

A 17-year-old printing student is the first prize winner in the national IPI Essay Contest, which this year attracted 8000 entries in the United States and Canada. This year's essay topic was *Printing and American Defense*. The winner is Paul Ewing, jr., a senior at MacComber Vocational High School, Toledo, Ohio, who was already planning to prepare for a career in printing at the Carnegie Institute of Technology's Department of Printing.

As first prize, he receives a $300 college scholarship, which he will apply at Carnegie.

For the first time, second prize in the contest went to a girl, Dixie ("Dick") Lonsdale, 14 years old and a ninth grade student at Lincoln Junior High School, Santa Monica, California. Miss Lonsdale wins a trip to New York City as her prize.

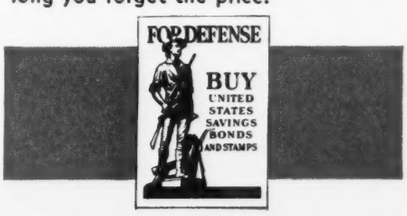
Third prize, 50 dollars, was awarded Valmore Provencal, 17-year-old senior at Laconia High School, Laconia, New Hampshire.

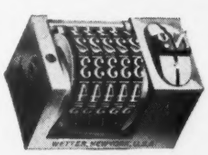
Billy Chapman, Central High School, St. Joseph, Mo., is the fourth place winner and receives twenty dollars.

He Digs Up The Darndest Things About

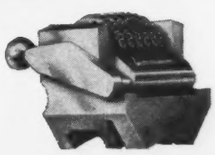
Numbering for Profit

- "Count me out if that's the lesson for today."
  - ★ "Why Pop—that's how Priests numbered for profit in the days of the Pharaohs."
- "No wonder it was said that a profit is without honor."
  - ★ "Pop, you're not kidding the Kid. What you mean is that there's profit in numbering when it's done right."
- "Sure. And how's it done right?"
  - ★ "I'll repeat what you've taught me. You number better with a Wetter, because—don't stop me—the oval plunger can't wobble, so the numbers can't smudge. The frame is machined from solid steel—so it can't bend or warp or get the wheels out of line. The rugged construction makes Wetter last so long you forget the price."





Wetter Lock-Wheel
One of many models



Wetter Rotary
One of many models

WETTER NUMBERING MACHINE CO.
ATLANTIC AVE. & LOGAN ST., BROOKLYN, N. Y.
Sold by all dealers and branches
AMERICAN TYPE FOUNDERS

-2940

LET'S PUT ON A

TELEPHONE CAMPAIGN

UNQUESTIONABLY every engraving plant, electrotype plant, printer, and newspaper has some idle or obsolete printing metals. Many engravings, electrotypes, or stereotypes will never be used again. We suggest a telephone campaign to secure the release of this dormant metal. Have someone in your organization call up the owners, get their permission to put these metals back into circulation. You'll be surprised how many of your customers, realizing the shortage of printing metals, will cooperate with you. Ship this dormant and scrap metal back to us. Remember — you can get new metal, cash, or credit for your dormant or scrap metal. Act now! Don't wait!

Note—All copper and brass is resold by us to licensed smelters.

IMPERIAL TYPE METAL CO.

PHILADELPHIA NEW YORK CHICAGO

Imperial

Serving the Printing Industry Only

Harris's New Southern Division—*Expressing complete faith in the growth of the company's Southern trade, Harris-Seybold-Potter, builders of lithographing and binding machinery, on January 17 opened a new Southern headquarters building at 220 Luckie Street, N.W., Atlanta. Many of the South's leading members of the Graphic Arts industry were in attendance at the opening. M. L. Mann, southern Division Manager for Harris, was host also to members of his own organization, including R. W. Mitchell, Harris President, and H. A. Porter, Vice President in Charge of Sales. Also from the home offices in Cleveland were A. T. Walker, Assistant Sales Manager of the Harris Division; William Wood, in charge of Chemical Research and Ralph Honeck, in charge of Chemical Demonstration. From the Seybold Division in Dayton were J. C. Dabney, Sales Manager; Glenn Baber, Assistant Sales Manager and W. R. Spiller, in charge of Engineering.*

EXECUTIVE ¶s

Officials of The Timken Roller Bearing Company at Canton, Ohio, recently announced the retirement of Peter Voss. Mr. Voss completed a 24-year period of service with the Timken Company. He first served as a clerk in the Purchasing Department, became Purchasing Agent in 1923, and since 1934 served as Director of Purchases.

Jack Beierwaltes of the E. J. Kelly Co., Kalamazoo, Mich., has been appointed publicity chairman for the International Association of Printing House Craftsmen convention which will be held in Grand Rapids, Mich., August 9, 10, 11, and 12.

Joe. A. Bennett who has been associated with Lynch Corporation, Anderson, Ind., in the development of the Engrav-O-Graph (illustrated and described in the February *Printing Equipment Engineer*), has been called to the United States Army Signal Corps. He has been assigned to duty at Fort Monmouth, N. J., with commission as first lieutenant at the Replacement Pool.

Frank B. Gillam has been named general manager of the Prompt Printing & Publishing Co., 2814 Detroit Ave., Cleveland. He assumed his new duties early in February. Mr. Gillam is well known among International Craftsmen's Association membership. He has been a

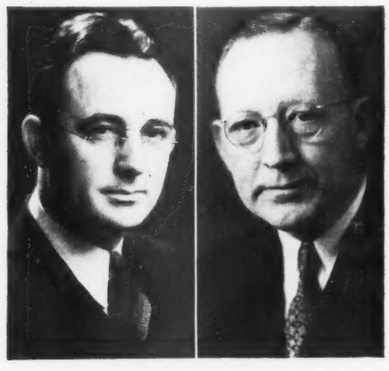
member of the official family of the Cleveland Club for a number of years and has represented the club as a delegate at several international conventions. Previously, Mr. Gillam was general superintendent of the Consolidated Press and Publishing Co. During the past several years he has represented the Chas. Eneu Johnson Printing Ink Co. in Cleveland territory. His many friends will be pleased with his preferment.

Professor Glen U. Cleeton, Head of the Department of Printing at Carnegie Institute of Technology, Pittsburgh, has been appointed Assistant Director of the Division of Humanistic and Social Studies. The appointment was announced by President Robert E. Doherty. Professor Cleeton will continue as Head of the Department of Printing, but he also will assist with the organization and development of divisional programs on instruction and with other divisional functions.

Chief Norbert A. McKenna of the Pulp and Paper Branch of WPB has resigned, effective February 26. He is a former vice president of the U. S. Plywood Corporation and had been in charge of the branch since July 1941. McKenna's successor has not been officially announced at the time of going to press.

E. C. Raasch, manager of the Cleveland branch, and Walter S. Marder, manager of the Boston branch of American Type Founders, have been transferred from their managerial posts to the company's recently acquired new plant in Newark, N. J. Additional war work taken on by ATF made it necessary to acquire the new plant which will be used exclusively for the manufacture of defense materials. The plant known as the ATF Mount Division will be operated under the direction of ATF Vice President Frederick B. Heitkamp. Several other members of the sales and service force will also be transferred to Newark for the duration.

According to Commercial Vice President J. E. N. Hume, of the General Electric Company, F. W. McChesney and Neal L. Parker, of the Company's industrial department, have been appointed assistant sales managers, respectively of



the Industrial Manufacturers Section and of the Machinery Manufacturers Section. The appointments are effective immediately. In 1940, Mr. McChesney became sales engineer of the industrial manufacturers section, specializing in the application and sale of electric plant equipment in the printing and publishing industry, and in the principal war industries. Since 1937, Mr. Parker had been in charge of the manufacturers section of the industrial department at New York.

MODERN METHODS
for today's job!

Increasing output and reducing costs are of paramount importance in newspaper production.

Teletypesetter system for automatic slug line casting machine operation is not only faster but it is most convenient for meeting present day conditions. Let us analyze your problem for you.

TELETYPESETTER CORPORATION
1400 Wrightwood Avenue, Chicago, Ill.
New York Office: 172 Fulton Street, New York, N. Y.

TELETYPESETTER
REG. U. S. PAT. OFFICE

End **CUTTING EDGE WORRIES!**

Special alloy steel that holds a keen cutting edge . . . temper that doesn't draw under the heat of fast feeding . . . toughness that resists shock. Get these advantages by specifying SWW high speed knives.

SIMONDS WORDEN WHITE CO., Dayton, Ohio

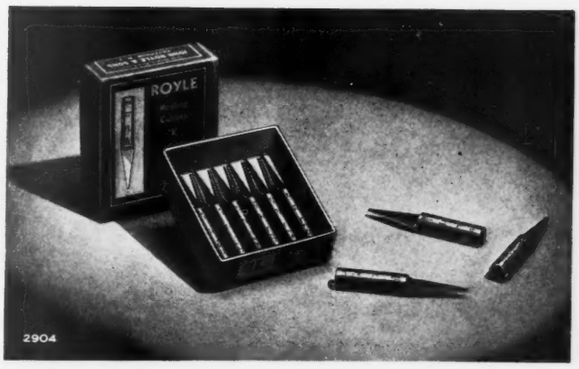
S. W. W. KNIVES

Send for this COLOR BOOK

With this book, any group of colors can be located at a glance. All colors are shown in three Ben Day values, as well as solid. There is provision also for easy matching of colors. Send for your copy.

WM. C. HERRICK INK CO., INC. • East Rutherford, New Jersey

Herrick



ROUTING CUTTERS THAT CUT!!

Choose Style According to Use

Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

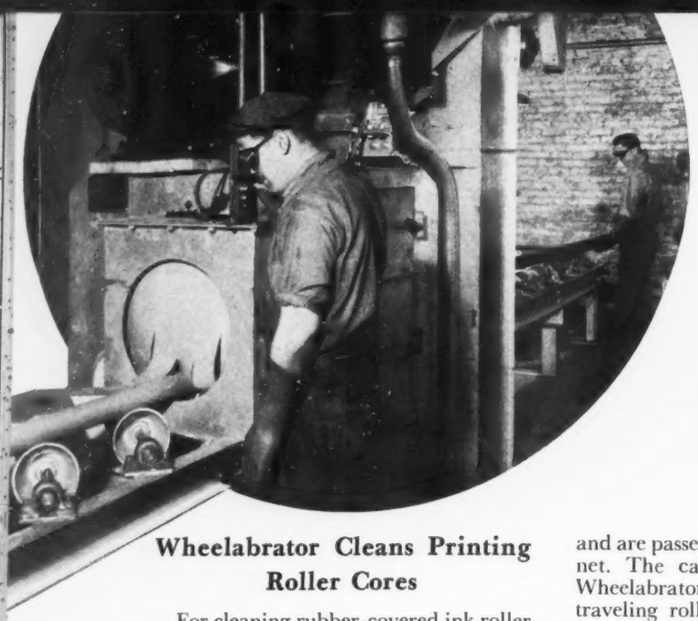
All Royle Routing Cutters reflect advantages gained through more than eighty years' experience in making these tools. We promise no miracles, but offer a complete line of cutters in every respect the finest that sound design, fine material and expert workmanship can produce. ***Order Direct Or Through Your Dealer . . . Be Sure It's a Royle.***

Write for catalogue 425

ROUTERS · TRIMMERS
BEVELERS · SAWS

JOHN ROYLE & SONS

8 ESSEX STREET PATERSON, N. J.



Printing roller cores may be cleaned and roughened ready for covering, in American Foundry Equipment Co.'s Wheelabrator. Roller cores are cleaned when passing through the square cabinet in front of the operator by airless blasting with No. 45 steel grit. A few seconds in the blasting area are required for proper cleaning. The core travels on a skewed roller conveyor through the cabinet rotationwise.

Wheelabrator Cleans Printing Roller Cores

For cleaning rubber-covered ink roller cores after the rubber has been stripped off, and previous to applying the new covering which is to be vulcanized on the core, American Foundry Equipment Company, Mishawaka, Ind., has devised a machine which is called the Wheelabrator.

In the cleaning operation, the core is mounted on a skewed-roller conveyor and are passed through a stationary cabinet. The cabinet contains the airless Wheelabrator unit mounted over the traveling roller core. As the revolving core is passed through the cabinet, it is blasted with a No. 45 steel grit. No compressed air is used to blast the steel grit against the core surface which is to be cleaned and roughened.

The Wheelabrator mechanism itself is not visible in the illustration, being located in the dust-proof cabinet. Briefly, the manner in which the steel grit is projected against the roller core is as follows: Two large metallic disks are spaced apart with eight radially disposed throwing blades or "inside spokes" to form a so-called wheel. A hopper containing the steel grit is positioned at one side of the wheel. The grit is fed through a duct to an impeller which rotates with the wheel and carries the grit to an opening in the stationary control cage in the center of the wheel where the grit is discharged to each bladed section of the wheel. In its passage to the periphery of the wheel, the passage of the steel cleaning grit is gradually accelerated and the grit is thrown with great velocity from the rimless wheel upon the roller core because of the resultant radial and tangential forces. Small roller cores are roughened in 20 sec. and larger rollers may be cleaned and roughened in a few minutes.

Metal roller cores which may be cleaned vary in size from ¼ in. diam. by 7 in. long to a maximum of 16 in. diam. by 12 ft. long. Weight ranges are from a few pounds up to 750 lbs.

Further information may be obtained from American Foundry Equipment Co., Mishawaka, Ind.

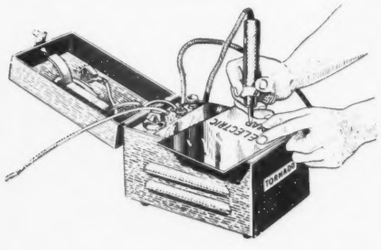
THE Ever Ready Label Corporation recently conducted a $500 photographic contest under the supervision of President Sidney Hollaender. More than 400 contestants photographed the executive offices and production departments. It is said that few places in New York contain as much and as wide a range of photographic material as the plant of the Ever Ready Label Corporation. Everything is new and shining, the present quarters consisting of 44,000 sq. ft. floor area having been occupied just recently.

Subjects for the contest were classified as architecture, people at work, artists, equipment in use, still life and table tops. In the production departments, for example, where mass production methods are used throughout, the photographers found much interesting material. There are long rows of flat-bed presses in high speed operation producing labels of every size and shape and in color combination. The Ever Ready Label Corporation's business has been built up around highly specialized label equipment over a period of 27 years. In the pressroom, 19 New Era presses together with other equipment produce more than 9,000,000 labels daily. Nearly 200 employees are associated with the plant and offices.

In the picture shown here, besides Vice President Ralph Taurone and the pressman, three camera contestants work simultaneously on one of the New Era multi-process presses.

Tornado Electric Etchers

Announcement is made of Electric Etchers of special design by the Breuer Electric Mfg. Co. These Etchers, made in various models, are specially adapted for marking dies, tools and other portable equipment for permanent identification of all smooth-surfaced steel, iron and their alloys.



Tornado Electric Etcher. Contact of the etching point with the object to be marked cuts a deep identification mark. Writes just like writing with pencil.

Etcher equipment includes tools, switch, indicator lamp, cords, etc. all of which are contained in a compact, portable case.

Etchers are made for light and heavy etching. The lighter type of etching is on tools, gears, saws, etc. The heavy-duty etching is on large-sized smooth-surfaced objects.

A red light wired into the equipment tells the operator when the switch is on. The etcher plugs into a socket of corresponding current. A switch is turned to obtain desired etching heat. Model A weighs 16 lbs. Model B weighs 29 lbs. Further details may be obtained by writing to the manufacturer, or in care of *Printing Equipment Engineer*.

Tin Tightens

BECAUSE of the expanding war production program and the loss of the world's principal tin producing section in Malaya and the East Indies, it is reported that tighter restrictions on the use of tin will be issued soon by the government.

Just what cumulative effect the government's present tin conservation order will have upon the printing metals situation is problematical at the present time. The increased national shifting of printing orders from civilian needs into a reduced volume of contractor's printing needs has not made it possible to compute the metals situation with certainty. Nearly everyone is agreed, however, that printers will find it necessary to get along with "starved" alloys as the war progresses.

A temporary ray of light is seen in the reported forthcoming WPB order by means of which millions of book plates will be released to the industry for conversion into active metal.

As futile as the suggestion may seem and irrespective of increased metals and production costs to the printer, a substitute of some kind would prove a happy answer to the present "confusing and incalculable situation," and certainly would accelerate the war program so far as the use of this important metal is concerned.

Ink Research Facilitated

Ink research being conducted by the Michigan Research Laboratories, Kalamazoo, for the E. J. Kelly Co., ink makers, has been facilitated by the former firm being granted an A-2 rating by the Priorities Division of the OPM, it is reported by the E. J. Kelly Co.

As a result of the priority rating, Michigan Research Laboratories chemists are enabled to continue their research work on pre-war levels. Already progress has been reported as being made in the development of alternates for some of the critical raw materials used in the manufacture of certain type printing inks.

According to reports from the E. J. Kelly Co., research is not being entirely confined to ink problems resulting from present defense conditions. Rather, a share of the research is directed toward improving already high ink standards and developing new type inks which can become available in the post-war period when most raw materials again become plentiful.

No. 3 Vandercook
Proof Press
DO SOME FIGURING
DO NOT ORDER A PROOF PRESS unless there is an actual need now or in the near future. The available stock is limited and replacement is uncertain.
If errors in jobs are frequent, if there are production press delays because of faulty forms, if changes in paper standards are not found until jobs are ready to run---it is time to consider a new proof press.
The No. 3 Vandercook Proof Press is the favorite of thousands of printers. It can be used for making etch proofs, color proofs, or for premakeready. It is sturdy, and easily operated. It makes the kind of proofs that customers expect from good printers.
Most printing executives know that good proofs mean economy and savings of time and money. Do not waste either with inefficient equipment.
VANDERCOOK
Proof Presses - Block Levellers - Hacker Gauges
VANDERCOOK & SONS, Main Office and Plant, 900 North Kilpatrick Avenue, Chicago
Eastern Branch: 216 East 45th Street, New York
Canada: Sears Limited, Toronto

Now 16⅔% MORE PACKING FELT for 8½% Less

This is the same SUPERIOR GLUtex gummed packing felt that this company has sold for years. Supplied in gauges .025, .030, .035 in 18" x 28"; in gauges .040, .045 in 18" x 24"; in gauges .050, .055 in 18" x 20"; in gauges .065 in 18" x 18" sheets—Superior Glutex.

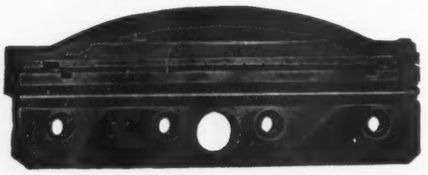
1	2	3	4	5	6	
Sheet 28"	Sheets 56"	Sheets 84"	Sheets 112"	Sheets 140"	Sheets 168"	168 Inches
15c	30c	45c	60c	75c	90c	SUPERIOR 90c

18" x 24" SHEET. OTHER BRANDS PACKING FELTS

1	2	3	4	5	6	7	
Sheet 24"	Sheets 48"	Sheets 72"	Sheets 96"	Sheets 120"	Sheets 144"	Sheets 168"	168 Inches
14c	28c	42c	56c	70c	84c	98c	Other Brands 98c

AMERICAN PUBLISHERS SUPPLY—17 Stewart St., West Lynn, Mass.

We Have Something To Brag About In "STAR" Molds



The test of time has substantiated our claims with regard to this most important adjunct on a typesetting machine. They have been giving satisfactory service for years in numerous plants throughout the country.

No *harder — more accurate* product is available.

It takes a year to make a "STAR" Mold. In the interim, between operations, it is seasoned, so that it will warp less readily when placed in service. It is brought up to heat twice in the course of manufacture, to give further resistance to warping.

A specially selected steel, and a process of hardening adapted to this steel gives a high degree of hardness to insure long service.

It is, therefore, to your advantage to specify "Star" Molds on replacement orders.

ACE BELTS
FOR EVERY PART OF THE MACHINE
DO NOT STRETCH — LAST LONGER

Precision
TRADE ★ MARK
Parts

LINOTYPE PARTS COMPANY

NEW YORK
203 Lafayette Street

KANSAS CITY
314 West 10th Street

CHICAGO 318 West Randolph St.
MINNEAPOLIS 503 Fourth Ave., South
DENVER 1441 Blake St.

They like to have some CERTIFIEDS *in reserve*

and for a variety of reasons

• Many stereo foremen — more or less addicted to some other make of mat — feel safer if they have a reserve supply of Certifieds . . . Some turn to them for particular effects. One likes them for clarity, another for speed and another for faithful half-tone reproduction . . . Still others use them for a "change" when things are going wrong.

• But it is hard to go part way with Certified and not end up by going the whole distance . . . Occasional use for particular reasons frequently results in making Certifieds the chief reliance of the department. . . Scores of steady Certified users got started in just that way.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M, New York, N. Y.

Certified
DRY MATS

PRINTING PATENTS REPORT

Covering Patents Issued January 27, February 3, February 10, February 17

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,272,086. BOOK WITH A REMOVABLE SUPPLEMENT, so assembled that the leaves of the permanent volume can be turned without interfering with the leaves of the attached supplement, and so that the permanent volume and the attached supplement can be opened at the same time for joint examination. This is accomplished by inserting a rear flap of the supplement in a pocket inside the rear cover of the permanent volume, the supplement being constructed to open vertically adjacent to the permanent volume. Invented by Milton H. Harris, Brooklyn, N. Y. Unassigned. Application November 30, 1940. 4 claims.

2,273,049. IMPROVED METHOD FOR INSERT-GATHERING OF SIGNATURES, utilizing a means for detecting signatures of erroneous thickness, and a calipering or gauging mechanism adapted to operate in the transfer of each signature to the support or saddle upon which the signature groups are accumulated at a later stage than heretofore. The calipering thus takes place at the optimum time and position for determining its possible defective character, namely, when it is about to join the traveling signature group for which it is destined. Invented by Paul E. Kleineberg, Easton, Pa. Assigned to T. W. & C. B. Sheridan Co., New York, N. Y. Application January 16, 1940. 23 claims.

Composing Room Equipment:

2,271,745. PROOF PRESS such as is used for making proofs of newspaper advertisements and the like, actuated by electrical means and having an improved safety mechanism for automatically stopping the operation of the press without injuring the hand of the operator, if his hand contacts an exposed moving part of the press. In such a case, the motor of the press will be reversed and the press will be simultaneously reversed and braked. In addition, each unit of the press which might catch the hand of the operator is provided with a safety bar which will operate if the hand of the operator touches the bar at either end or at its middle. Invented by John Peters, Teaneck, N. J. Assigned by mesne assignments to Vandercook & Sons, Chicago, Ill. Application October 26, 1940. 8 claims.

2,271,750. PROOF PRESS, having improved means for eliminating possibility of injury to the operator by providing a guard or impact element on the impression cylinder carriage and a similar element on the carriage for the form rollers. These guards will engage with the operator's hand, or with other obstructions, if not rapidly withdrawn and are cooperable with control means for the press driving source to stop operation of the press. If the press is driven by an electric motor, the guard elements are cooperable with actuating means or a switch mechanism in the motor supply circuit to stop forward drive and to reverse the motor for reverse drive of the press, so that upon impact of the guard members with the hand or other obstruction, the press will be almost instantly stopped and reversely driven until the hand or obstruction is released. Invented by Edward O. Vandercook and David D. Vandercook, Evanston, Ill. Assigned to Vandercook & Sons, Chicago, Ill. Application December 13, 1940. 6 claims.

2,272,941. GUARD FOR A LINOTYPE MACHINE designed to protect the control lever, control rod, automatic stop and other movable elements of the machine from collecting molten metal due to splash caused by the action of the mechanism that feeds the molten metal to the mold disk of the machine. The guard is so constructed that it will fit in position over the control lever of the machine adjacent the mold disk, and be held in place by the upper bolt of the control lever bracket, thereby avoiding the necessity of making alterations in the construction of the machine in order to mount the guard. Invented by Louis E. Glazer, Quincy, Mass. Unassigned. Application July 7, 1941. 1 claim.

2,273,267. TYPE HOLDER, so constructed that it can be filled at the type making machines and can be set directly into the typesetting machine magazines, whereupon the holder can be removed for re-use by the type-maker. This arrangement simplifies the step of installing the type in the proper magazine, and in addition prevents the type from becoming cocked or twisted in the magazine channels, particularly in regard to types with small faces. The type holder is formed of transparent material having a flanged channel shape designed to receive only the heads of dovetailed footed type, and is made of a condensation product or other transparent plastic. Invented by George Houk, Dayton, Ohio. Assigned to Dayton Tool and Engineering Co., Dayton, Ohio. Application June 11, 1940. 7 claims.

Feeding, Folding, Delivery:

2,272,045. SHEET CONTROLLING APPARATUS adapted to be attached to the side registering mechanism of a vertical-type printing press to advance light weight stock to the front guides in good register at high speed operation. The side registering mechanism is provided with registering brushes or other flexible members which move with the registering mechanism into engagement with the top face of a sheet to be registered. The sheet, during its final forward registering movement is urged forwardly against the front guides by means of the brushes and is also held down onto the transfer table, thereby avoiding displacement. Invented by Edward F. Dudley, Oak Park, Ill. Assigned to The Miehle Printing Press & Mfg. Co., Chicago, Ill. Application December 16, 1940. 10 claims.

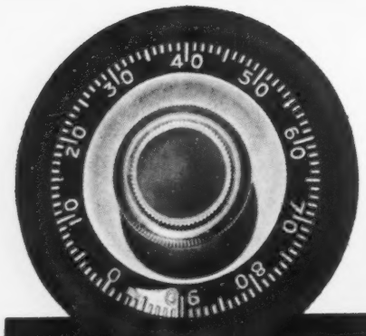
2,272,140. APPARATUS FOR CONTROLLING THE TENSION OF A PRINTING WEB being fed to a printing press, which compensates for web tension changes created by the motion of the roll handling mechanism. The device comprises a web tension weight and a magnetic clutch adapted to be engaged with the weight when energized. A wheel is adapted to turn with the weight when the clutch is in operative position, the wheel having means to vary the tension to compensate for any movement of the web roll into the tension belts. Invented by Paul L. Tollison, North Plainfield, N. J. and Charles S. Caffrey, Port Washington, N. Y. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application April 22, 1939. 2 claims.

2,272,225. IMPROVED WEB SPLICING DEVICE for a printing press, comprising a double arm magazine reel combined with a pasting device, whereby separate tension devices serve the two roll positions but are controlled from a common source. The purpose of the device is to use

THE alert policy of the makers of Zomo Electric Zinc and A-Z Alloy to produce metals which meet present day demands is resulting in an increased call for these products. Reports from both front office and shop reveal that Zomo Electric Zinc and A-Z Alloy are saving as they serve.

These metals are made by the scientifically correct electric induction process and are dependably uniform in quality—their composition, gauge and temper do not vary. Moreover, they are low in acid consumption. The reliability of these metals saves valuable working minutes as well as materials. Today, with the new plastic Backote, they offer an economy which is worthy of your consideration.

You can order Zomo Electric Zinc and A-Z Alloy, plain or Backote, from leading metal suppliers.



THE RIGHT COMBINATION

Cushion Cork
PAT. 2,207,999 IN COMB. WITH TINGUCORK

&

TINGUCORK
PAT. 2,207,999 IN COMB. WITH CUSHION CORK

Patent No. 2,207,999 Combination now makes it possible for pressroom operators to secure Superior Cork Packing in a wide range of gauges with the combined advantages of Tingucork's density and Cushion Cork's resiliency to compensate for plate irregularities and mechanical conditions.

"CUSHION CORK"— Called the safety blanket because its high resiliency allows it to accept extreme compressive stresses, such as web breaks, and still immediately recover its original size or gauge.

"TINGUCORK" — Of greater density than Cushion Cork; *must always* be used as a companion blanket with Cushion Cork where a Drawsheet provides the printing surface.

TINGUE BROWN AND COMPANY
114-120 EAST 23rd STREET, NEW YORK, N. Y.
1227 WABASH AVENUE, CHICAGO, ILLINOIS
723 E. WASHINGTON BLVD., LOS ANGELES, CAL.
CANADIAN SALES AGENTS
ROSS WHITEHEAD & CO., LTD.
MONTREAL, CANADA

To secure the full depth of impression and insure true reproduction of the original, use Burgess Chrome Mats.

235

A Laboratory Product
BURGESS Chrome MATS

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats
FREEPORT ILLINOIS

Pacific Coast Representative
RALPH LEBER CO.,
426 Polson Bldg.,
SEATTLE, WASH.

National Emergency Dictates Simplification of Paper Lines

Gilbert DISPATCH Bond and Gilbert AVALANCHE Bond

now to be known only as

GILBERT BOND

25% Cotton-Fibre-Content

This is an announcement we planned to make almost a year ago. The growing demand for GILBERT watermarked quality paper, representative of this famous fifty-year-old name, made the announcement imperative.

But, the economies and restrictions of Defense did not make the new GILBERT paper announcement feasible. Now, actual wartime necessity dictates that paper lines be simplified . . . materials and labor be conserved . . . excessive operations be eliminated. That's why, as soon as present stocks of DISPATCH, AVALANCHE and ENTRY papers are exhausted, you will be supplied with GILBERT Bond and GILBERT Ledger.

As originally planned last year, the new GILBERT watermarked papers would be the best of their types that materials and skill could produce. *Today, they still will be the finest in their class . . . the finest 25% cotton-fibre-content papers that wartime restrictions will permit!*

Gilbert DISPATCH Ledger and Gilbert ENTRY Ledger

now to be known only as

GILBERT LEDGER

25% Cotton-Fibre-Content

Concentration upon GILBERT watermarked papers in our 25% cotton-fibre-content line will permit better productive facilities . . . better efficiency in deliveries to you, through simplification of stocks.

The GILBERT Bond line will be available in white and the permitted color range, with an attractive cockle finish. A laid finish will be available in white and ivory. Envelopes to match in entire line. The GILBERT Ledger line will be available in white and buff, and six colors for machine posting. Your Gilbert paper merchant will be glad to give you any further information desired regarding GILBERT Bond and GILBERT Ledger. Gilbert Paper Company, Menasha, Wisconsin.

GILBERT *Quality Papers*

★ ★ ★

two rolls of paper to feed a continuous web into the press by splicing a new roll of paper to each expiring roll as the latter is used up, the splicing being accomplished while the web is running. The device is constructed so as to combine the feature of applying tension to the running roll controlled by the diameter of the roll while employing a magazine reel, one controlling means being used to govern both rolls as each becomes the running roll and to provide a double brake arrangement so that each brake takes care of one of the two rolls whereby both sets can be controlled by a single regulating mechanism. Invented by Charles L. Ricards, South Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., New York, N. Y. Application September 1, 1937. 1 claim.

2,272,820. WEB PRINTING PRESS having, in combination with a plurality of spaced printing couples, more particularly a web drying apparatus comprising an elongated casing positioned between the couples. The dryer casing is provided with a slot for the passage of the web, and with means for raising and lowering the position of the casing and slot for adjustment with printing cylinders of different diameters. Invented by Leroy Q. Presby, Melrose, Mass. Assigned to Rotogravure Engineering Co. of Massachusetts, Boston, Mass. Application July 27, 1939. 2 claims.

2,273,232. RECIPROCATING MECHANISM for doctor blade of textile printing machine. Mechanism is adapted for connecting an oscillating crank arm with a pivot arm associated with the doctor blade for reciprocating the latter, and which is so constructed that the connecting rod may be releasably connected with or disconnected from the pivot by manipulation of locking parts located at a point remote from the pivot and adjacent to the crank arm without requiring adjustment of the bearings when the parts are assembled. Invented by Stephen B. Stafford, Oxford, Mass. and Herman A. Smith, Holden, Mass. Assigned to Rice Barton Corp., Worcester, Mass. Application September 13, 1939. 11 claims.

2,273,669. SECTIONAL INKING ROLLER for printing presses of the multicolor type, in which the inking surface of both the plate rollers and ink distributing rollers is formed in sections, one section for each compartment in the ink font. The roller has a novel bushing and flange construction for attaching the sections to the roller, whereby the sections may be readily replaced or adjusted as the color and space conditions of a particular printing require. Invented by Russell L. Stumpf, Springfield, Ohio. One-half assigned to Louis J. Stumpf, Springfield, Ohio. Application February 28, 1941. 5 claims.

2,272,457. SHEET FEEDER of the type wherein single sheets are fed from the top of a stack supported upon a vertically movable table, the sheets being moved from the stack to a conveyor which carries them to the feed end of the operating machine. A novel arrangement is provided for regulating the spacing of the successive sheets as they are delivered to the conveyor, whereby any desirable spacing may be effected for sheets of various sizes. A further improvement is a feeler-controlled intermittent device for operation of the table-elevating mechanism as a stack of sheets on the table is depleted. Invented by Albert Broadmeyer, Norwalk, Conn. Assigned to John McAdams & Sons, Inc., Norwalk, Conn. Application June 25, 1940. 2 claims.

2,273,451. AUTOMATIC FRICTION DRIVING MECHANISM FOR NEWSPAPER CONVEYOR of the type formed of a pair of belts carried over rolls for delivering folded newspapers from the folder. The mechanism is so constructed, that on the occurrence of a breakdown, the driving mechanism transmitting power between the operating chain and the conveyor will continue to operate, while the driven part remains stationary, thus replacing the usual break or shear pins which are employed for the purpose. There is also provided a connection between the drive for the conveyor and the driven shaft, which moves longitudinally on that shaft to provide a yieldable drive; but in case of obstruction, when the jam is removed, the drive connection will automatically take up its load again and restore the conveyor to its normal position. Invented by Charles L. Richards, South Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application April 5, 1939. 2 claims.

2,273,476. ADJUSTABLE STACKING FRAME for piling freshly printed sheets, which will accommodate sheets of various sizes. The frame consists of a set of sheet metal wall members arranged to form a rectangular frame and a set of metal clamp members. The wall members are spaced apart a trifle wider than the size of the finished sheet so that when the sheet falls into the assembled frame, the air therein slows the descent of the sheets and gives the fresh ink a chance to dry before touching the sheet just ahead. The speed of fall of the sheet can be regulated by expanding or contracting the frame walls. Invented by Harry A. Shaffer, East Cleveland, Ohio. Unassigned. Application July 2, 1940. 9 claims.

Miscellaneous:

2,271,124. ROLLER-COATING COMPOSITION for printing surfaces of offset printing blankets, printing rolls, engraving gums, etc., which is more resistant to the action of printing inks than natural rubber and has better wetting properties than natural vulcanized rubber. The composition is prepared by vulcanizing a mixture of rubber and a copolymer of butadiene and acrylonitrile, compounded and vulcanized in the same manner as natural rubber. Invented by Arthur E. Juve and Benjamin S. Garvey, Akron, Ohio. Assigned to B. F. Goodrich Co., New York, N. Y. Application August 3, 1940. 6 claims.

2,271,323. MANUFACTURE OF FLUSHING PIGMENTS, based on the discovery that a group of amines not heretofore known as flushing agents are useful as such. The value of the invention lies in the fact that only a small quantity of the flushing agent is needed to effect transfer and that the flushing agent is relatively inexpensive. Example of printing base ink:

Water wet iron blue press cake containing 500 lbs. of the pigment (dry basis)	2,000 lbs.
Litho varnish (a heat bodied linseed oil varnish)	500 lbs.
Cyclohexylamine	13 lbs.

Invented by Edward G. Yee, Chicago, Ill. Assigned to The Sherwin-Williams Co., Cleveland, Ohio. Application October 5, 1939, 10 claims.

2,272,364. OILING TOOL which may be inserted between machine parts, despite the small space between them, to apply lubricant to adjacent surfaces without danger of soiling the outer surface with oil. The tool is especially useful for oiling numbering wheels on printing machines without contaminating the printing surface of the wheel. The tool comprises an airtight reservoir which feeds oil through a flat and very thin oiling nib with an oil outlet at its point. The oil will not discharge through the outlet until the lubricating surface is contacted or until pressure is applied to the side of the nib. Invented by John W. Connors, Washington, D. C. Unassigned. Application May 24, 1940. 4 claims.

2,272,706. METHOD OF FORMING A COMPOUND which may be applied in the form of a powder to inked surfaces and which will form raised letters or designs. The printing powder comprises a resin, calcium carbonate and zinc stearate, ground up, mixed together while heat is applied and then cooled to form a solid body which is subsequently reduced to powdered form for use in the printing process. Invented by A. de Vere Harnett, Racine, Wis. Unassigned. Application March 26, 1938. 14 claims.

2,272,810. PROCESS OF PRINTING CELLULOSIC TEXTILE FABRICS in resist styles so that white patterns are produced on a colored ground or, alternatively, colored patterns on a differently colored ground. Example: Cotton fabric is printed with a paste made by incorporating together the following: stearamidomethyl pyridinium chloride—4 parts; diacetone alcohol—5 parts; starch tragacenth thickening 1:1—50 parts; water—41 parts. In making up this paste, the temperature should not exceed 40°C. The printed fabric is dried and then steamed for 15 minutes and then grounded in one of the following solutions:

	A	B
Soledon Jade Green XS paste	3	
Soledon Orange RS powder		1.5
Tragacenth thickening 1:1	5	5
Sodium nitrate 30% aqueous solution	3	3
Water	89	90.5

The fabric is then dried, developed by passing through a 2% solution of sulphuric acid (168°T.W.) at 70° C., washed, soaped and dried. A clear cut white pattern on a green or orange ground is thus obtained. Invented by Denys P. Milburn, Bombay, India. Assigned to Imperial Chemical Industries, Ltd., Corporation of Great Britain. Application September 10, 1940. 9 claims.

Plate Making:

2,272,254. FLEXIBLE PRINTING PLATE, molded from a curing rubber composition and provided on the printing face with a fine fabric screen through the orifices of which the printing face material is sprayed in the form of fine rod-like protrusions into the matrix depressions that correspond to the printing surface areas. The porous grid, prepared from woven cotton fabric, is incorporated in the printing face of the plate to give sharpness and definition to the printing areas and to prevent "gasket" effect caused by air pockets in type depressions of a matrix. The mesh fabric grid is molded to the layer of rubber composition by heat and pressure. Invented by Hylton Swan, Upper Montclair, N. J. Assigned by mesne assignments to Bakelite Corp., New York, N. Y. Application June 17, 1938. 4 claims.

Printing Presses and Equipment:

2,271,125. OFFSET PRINTING BLANKET which is resistant to the action of printing inks and yet possesses the desirable mechanical characteristics of blankets made of soft vulcanized natural rubber. The new blanket comprises a pre-shrunk fabric base, a layer of low-set rubber forming the main body of the blanket and a surface layer of a vulcanized mixture of rubber and a copolymer of butadiene and acrylonitrile adhered to the low set rubber body. Invented by Arthur E. Juve, Akron, Ohio. Assigned to B. F. Goodrich Co., New York, N. Y. Application August 3, 1940. 4 claims.

2,271,160. PLATE CLAMP AND SUPPORT for securing printing plates to the form cylinders of lithographic, intaglio and other presses using thin plates, so constructed as to accommodate either short or long plates. The clamping mechanism is so arranged on the cylinder that a short plate may be attached to one side of the cylinder and the clamping mechanism later reversed to hold a long plate on the other side of the cylinder. Invented by William F. Huck, Richmond Hill, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application May 19, 1939. 14 claims.

2,272,376. WEB REGISTERING MECHANISM for high speed multi-color presses wherein effective color registration is accomplished by electrical means. The mechanism is of the type utilizing spots that are printed on the web by the printing cylinders. Photo-electric cells pick up these spots (by being responsive to changes in light intensity caused by the spots) and the resulting change in the photo-electric cell circuit is used in timed relation with the rotation of the respective cylinders to indicate whether the spot occurrence at the respective cylinders is in proper timed relation to the cylinders, so that the successive printings may be properly registered with the other impressions. In the present invention, an improved electric circuit is provided which is responsive to the high frequencies of spot occurrence on the web under all conditions of operation. This is accomplished with an improved control mechanism and circuits so that the cathode ray beam is modulated by impulses resulting from improper conditions of web registration. Invented by Hermann Kott, East Orange, N. J. Assigned by mesne assignments to Speedry Gravure Corp., Hoboken, N. J. Application September 6, 1939. 20 claims.

2,272,406. COLOR UNIT FOR INTAGLIO PRINTING PRESSES in which vaporization of solvents is prohibited between the doctor blade and the point of deposit of ink by a cover member which is positioned between a color bath or doctor blade and the web to be printed. The unit is especially designed for a press printing lustrous non-fibrous material such as regenerated cellulose, in which the web to be printed is contacted with the etched printing cylinder on the side of the cylinder while travelling downwardly, the web having an initial downward and then upward movement between the color units. The etched cylinder for depositing the color is thus encased to prevent drying of highly volatile solvents during the extra travel necessitated by the printing position of the web. Invented by Irving Gurwick, Mt. Vernon, Ohio. Assigned to Shellmar Products Co., Mt. Vernon, Ohio. Application October 13, 1937. 10 claims.

2,272,803. METHOD OF MAKING FANFOLD STATIONERY wherein the superposed forms in the final product will lie in exact registration because the forms are all printed simultaneously, even though two different grades of paper were used in forming a compound web in the rotary printing press. The invention employs an apparatus for gluing two separate webs together and printing and scoring them in a printing machine. An upper stationary web is fed down so that one of its marginal portions will be brought into overlapped relation with the margin of another web. The margin of the strip which is to be overlapped with the margin of the companion web passes over a roll. Liquid adhesive is applied to the strip margin from a pot by means of rolls. The two webs then pass through presser rolls which press the glued margins together to form a compound web. Suitable printing cylinders with inking rollers are provided to print alternate form width of the stationery at opposite sides. As the stationery leaves the press, it may pass through suitable folding apparatus. Invented by Elwood J. Horner, Cleveland, Ohio. Assigned to United Autographic Register Co., Chicago, Ill. Application June 10, 1940. 3 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Barrister Bldg., Washington, D.C.

WPB Amendment to Rubber Order

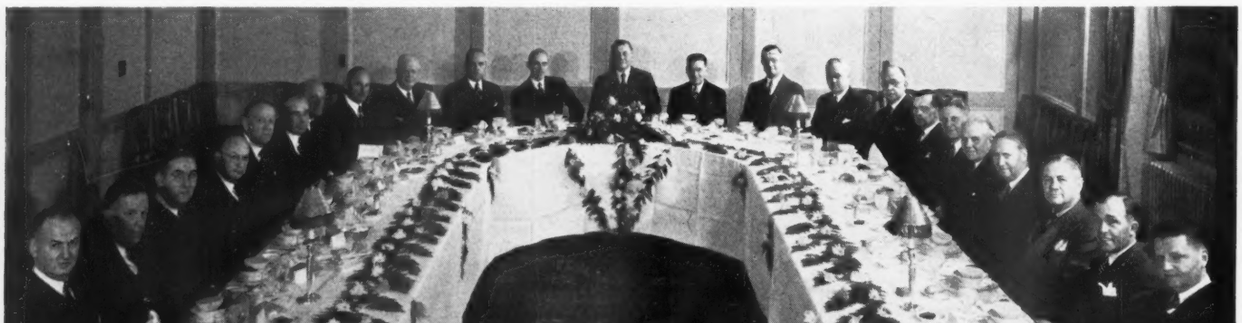
UNDER date of March 1, WPB Director of Industry Operations J. S. Knowlson, issued Amendment No. 5 to Rubber Supplementary Order No. M-15-b to restrict the use and sale of rubber. The original order contained two lists of products for which rubber and latex could be used only up to certain percentages of the average monthly consumption during the twelve months ended March 31, 1941, except to fill strictly war orders. In the new Amendment No. 5 four lists of permitted uses of crude rubber and latex are given.

Despite the addition of several articles, and the shifting of some into groups for which a higher rate of consumption is permitted, total rubber consumption under the new lists is expected to be somewhat smaller than under the original order.

Of particular interest to production departments of printing plants are the items listed in List A under Group 15. These are press cutting rubbers, offset and newspaper blankets, printing plates (including cements but excluding rubber stamps, box dies, band daters and toy stamps), printers' rollers, suction cups for printers' equipment, and rubber solution for wet plate negatives. Rubber and latex for these products may be used up to 80% of the average monthly consumption during the twelve months ended March 31, 1941.

Engravers' rubber (including necessary cements) may be used up to 40% of average monthly consumption for the like period.

Box die, engravers' type and stamp gum have been reduced 40%.



Farewell Dinner to Cortland Strang—Cortland J. Strang, Mechanical Superintendent of the New York *Times*, recently re-entered the U. S. Navy as a lieutenant. A graduate of the U. S. Naval Academy at Annapolis, Mr. Strang had spent several years in the Navy prior to entering the newspaper field.

In celebration of Lieutenant Strang's return to active duty, a number of friends assembled for a farewell dinner at the New York Athletic Club, with Neal Dow Becker, President of Intertype Corporation, acting as toastmaster. Among the speakers were Harold Hall, business manager of the New York *Times*, who expressed to Lieutenant Strang the good wishes of all his friends and associates in the *Times* organization. A. T. Mann, Jr., Vice President of Intertype Corporation, spoke as a representative of Lieutenant Strang's host of friends in the newspaper industry who could not be present at the dinner.

John J. Shea, Mechanical Superintendent of the Hearst Newspapers, presented Lieutenant Strang with a beautiful and useful desk ornament, combining a clock, barometer, thermometer, and compass, suitably inscribed.

Shown in the picture from left to right are: W. R. Skehan, New York *World-Telegram;* A. H. Burns, *Herald Tribune;* James Garvey, *Journal and American;* Arthur S. Thompson, G. H. Morrill Ink Co.; H. C. Mackenzie, Ideal Roller Mfg. Co.; T. A. MacElwee, Intertype Corporation; C. F. Hart, New York *Times* (retired); H. A. Peterson, Intertype Corporation; J. E. Martin, New York *Sun;* John J. Shea, Hearst Newspapers; Lieutenant Cortland J. Strang; Neal Dow Becker, Intertype Corporation; Harold Hall, New York *Times;* A. T. Mann, Jr., Intertype Corporation; Edmund Goodrich, New York *Post;* Oscar C. Roesen, Wood Newspaper Machine Corp.; Harry B. Adsit, New York *World-Telegram;* H. R. Freund, Intertype Corporation; M. J. Hodgins, New York *Daily Mirror;* T. A. Ryan, International Ptg. Ink Corp.; John Masterson, Huber Ink Co.; J. C. Dorn, Intertype Corporation; Stephen Lambert, Brooklyn *Eagle.*

"TRUE-MOLD"

Cork Molding Blankets

better molding with **"MATCHED"** *sets*

A "matched" set is matched in weight and density. Uniform density throughout these blankets gives "Tru-Molding" over the entire surface of the form. "Matched" sets of blankets makes it unnecessary to readjust molding pressure for individual blankets.

Order 2 or 100 — they will be matched in all their qualities. Each blanket has been scientifically tested and graded. We can furnish HARD & EXTRA HARD (Special) blankets that are matched in weight and density.

★ ★ ★

"PLATE-TAK"

Cut Mounting Tape

No Tacks! No cement to squeeze out! No water or heat used!

Simply lay a strip of this SUPER-THIN tape under the cut; press down by hand and the cut is there to stay. When through, the tape strips off, leaving clean surfaces on both cut and base . . . A word on the dispenser — it brings still more speed, convenience and economy to the use of Plate-Tak.

★ ★ ★

"FLECTO"

Gummed Backing Felt

POROUS — to permit the quick and easy escape of steam, coated with glue that will not slip or leave the matrix under heat. Its adhesive will not crack, peel or crystallize under any climatic conditions. Made in gauges .021, .025, .030 and .035, in sheets 18" x 24". And in gauges .040, .045, .050 and .060 in sheets 18" x 22" — cut in strips without extra charge. Free samples on request.

EASTERN NEWSPAPER SUPPLY

9603 Northern Blvd. Corona, N. Y.

ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots.

Wasteful Methods are Wicked Methods

During war times it is important that executives in essential civilian industries avoid production and materials waste wherever possible. To assist you in conserving time and material we have just recently redesigned the applicator nozzle of the tube in which ***Booth's Zink Cut Cement*** reaches you so that the flow of cement from the tube is restricted. You see, this cement functions most efficiently when used *sparingly*. Holding any kind of cut to wood or metal base is the sole purpose of this cement — and it's doing the job regularly in many printing plants.

• • •

Accuracy in the diameter of line-composing machine keyboard rubber rolls is of utmost importance. ***Booth's Black Rubber Rolls*** are made with great care to see that they are of the same diameter from end to end. If you are not now using these fine rolls order a trial pair at $1.25. By the dozen, $7.50.

We are suggesting that your firm place on all purchase orders sent to us the properly endorsed statement provided in OPM's A-10 Rating Under Preference Rating Order P-100 for Repair, Maintenance and Operating Supplies.

THE E. A. BOOTH RUBBER COMPANY

364 ROCKEFELLER BUILDING • CLEVELAND, OHIO

The Printing Metals Situation

THE situation pertaining to the common metals used in the printing industry is very serious, indeed, so much so, that orders will soon be published covering printers' scrap and obsolete metals. The aim is to get these back into re-use again. Look around in your plant now with a view to unfreezing any metals not currently needed in your operations.

Aluminum: Under mandatory control.

Antimony: All of it now goes into Government pool for allocation.

Copper: Claim is made that not enough is yet available to meet U. S. military demands and Lend-Lease commitments.

Lead: Printing industry cut to 90% of 1940 consumption. OPA is offering a bonus price for extra production, which should help considerably.

Nickel: Canada is the only source. It is now up to maximum production. For printer needs consult your last supplier for procedure.

Zinc: Absence of demands by auto industry is helping to relieve a shortage. A bonus price is being offered for increased production over 1941 to alleviate shortage of this critical war metal.

Tin: All tin mines, except Bolivia and Africa, now either in Jap hands or menaced by them. This situation is most serious and as a result type metal manufacturers must get along with 50% less primary pig tin than they required in 1940. This percentage may be reduced still further for the second quarter of 1942.

Nonferrous Metals—Smelter Quotations—Feb. 27, 1942

(100 lb. Lots)

	Feb. 2	*Feb. 27*
Aluminum (94%) minimum, del	$13.50	$13.50
Antimony (Am. spot, case lots, N. Y.)	14.00	14.00
*Copper (Electrolytic, Conn. Valley, deld.)	12.00	12.00
Lead (E. St. Louis pig)	6.35	6.35
Nickel (99% electrolytic anodes)	47.00	47.00
Nickel (99.9% electrolytic cathodes)	35.00	35.00
*Tin (Straits, spot)	52.00	52.00
*Zinc (prime West., spot, E. St. Louis)	8.25	8.25

*Trading suspended

These quotations furnished by *Daily Metal Trade*, Cleveland.

ATF's Alpha-Blox

Set in block-building fashion, American Type Founders states Alpha-blox consist of types on the printing surfaces of which appear a variety of straight sections, curves, L's and T's. When assembled in the composing stick, these segments form letters of the alphabet, figures, borders, ornaments and many other typographic designs. Alpha-blox

can be built into letters of various styles—sans-serif, block serif, curved serif and the like. They can be used to reverse the color of letters, to put letters in, or partly in panels, boxes or backgrounds, or they can be used to make simple illustrations or color spots.

Alpha-blox are furnished in linear and reverse styles. All of the characters are em-set except a few in reverse style which are en-set. They are cast in 12, 24 and 36 pt. sizes. In each point size there are 19 linear and 23 reverse characters.

A descriptive folder is available from American Type Founders.

Release **YOUR OLD METAL** *but*

Retain **YOUR ORIGINAL MATERIAL!**

The uncertainty of the future dictates conservation. Thousands of tons of usable metal, now idle in the form of old plates, may be returned to circulation through the aid of Wood Ad (dry) Mats.

By using Wood Mats you can replace inexpensively all engravings, electrotypes and stereotypes in your plant — at a tremendous saving of space. These molds may be used any time in the future should reruns be desired.

Remember — **WOOD AD MATS**

The Remedy for Metal Conservation

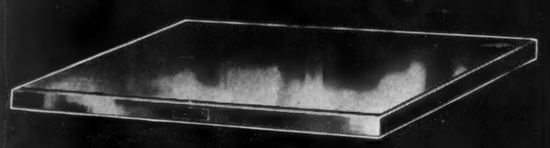
WOOD FLONG CORPORATION • Hoosick Falls, New York

New York Office: 551 Fifth Avenue

• • • stands for Value
Investment secure
Trustworthy KIMBLES
Make profits so sure.

Motors by KIMBLE
Distributed by AMERICAN TYPE FOUNDERS
Branches and Sales Agents in 25 Cities

SMOOTH
LEVEL • ACCURATE



CHALLENGE Semi-Steel
IMPOSING SURFACES

Dependable as the bed of your cylinder press, these superior surfaces are cost-reducing equipment. Built to last — two inches thick — strongly reinforced — will not sag or "give." No coffin required; permits a larger working area. Rabbet around the edge is right depth for standard galleys. Investigate now. A size for every need. Write for prices today!

Challenge
THE CHALLENGE MACHINERY CO.
Main Office and Factory: GRAND HAVEN, MICH.
Eastern Sales Office: 50 Church Street, NEW YORK
302

DON'T GIVE UP! ★ ★

AMERICA NEEDS YOU

W. A. Hammond
CHAIRMAN

While we'll all sacrifice in one way or another—perhaps in many ways for the duration—the people need your service to sustain their morale, to keep them posted on what is happening in the community, to keep them in touch with life at home and war abroad.

We've gone 100% here to serving the producers of the tools of war—but we will carry on with plans and new developments regardless, for your after war needs. Meanwhile, to the extent of our limited stock of Hammond TrimOsaws, Easy-Kasters, and Routers, we will gladly serve you.

With your younger men going into the service, your need of our machinery will be more than ever necessary, and we plan to be in a position to render prompt service on supplies.

"PRAISE THE LORD AND PASS THE AMMUNITION"

Hammond Machinery Builders INC.
1604 DOUGLAS AVENUE • KALAMAZOO • MICHIGAN
EASTERN BRANCH 71 WEST 23RD STREET, NEW YORK CITY

You can *Save* the *Time*
THAT IS NOW LOST IN...

1 BREAKING UP FORMS for distribution.
2 DISTRIBUTING USED TYPE, rules, leads and slugs back into cases and racks.
3 "PICKING" TYPE from standing jobs.
4 HUNTING FOR SORTS and looking for rules, leads and slugs.
5 MAKING READY on old used type and in piecing rules.
6 "SQUARING" YOURSELF with customers because used type and rules spoiled the job.

MAKE YOUR OWN TYPE, RULES, LEADS AND SLUGS ON A
Monotype Type-&-Rule Caster
★
Write for Full Information
LANSTON MONOTYPE MACHINE COMPANY
Monotype Building, Twenty-fourth at Locust St., Philadelphia, Penna.
Display in Monotype Valiant and Stylescript; Text in Monotype 20th Century

C&G
No. 3-A SAW TRIMMER

Even the **ARMY** *has stopped*

NEEDLESS WALKING

Economy of time is now vital to ALL production effort. C&G No. 3-A SAW TRIMMERS are established time-savers in many plants. *Multiple* efficiency is gained when C&G SAW TRIMMERS are so located that wasteful walking to and from the saws is eliminated.

Additional C&G Saw Trimmers, convenient to every make-up bank, will convert walking time to productive time — and more profit for you.

Write for latest circular on the C&G No. 3-A Saw Trimmer — and a list of users.

MILWAUKEE SAW TRIMMER CORP.
610 EAST CLYBOURN STREET, MILWAUKEE, WISCONSIN

Acidity in Paper

Four page technical bulletin entitled *Acidity in Paper Expressed in Terms of pH Values*, by M. S. Kantrowitz and R. H. Simmons of the Division of Tests and Technical Control, U. S. Government Printing Office, has been published by permission of Public Printer A. E. Giegengack. In the bulletin are discussed means for determining acidity in paper by the Colorimetric Method and the Electrometric Method. May be obtained gratis by addressing Technical Director, Government Printing Office, Washington, D. C.

NORTHWEST CONFERENCE

(Continued from Page 18)

graphite and graphite and oil combined. It seems the several mold insulators suggested are all satisfactory to their advocates. Castor oil and graphite or pommade and graphite were suggested as the answer to the "stuck" slug problem.

Composing Room Clinic

The Composing Room clinic under the direction of Composing Room Superintendent Robert E. Lee of the St. Paul *Dispatch-Pioneer Press*, centered around discussion of costs, production flow and composing room practices. Assisting Mr. Lee were Dave McGowan, Minneapolis *Daily Times* Composing Room Foreman; Fred Curle, *Star-Journal* and *Tribune* Superintendent, and Oscar Sundloff, *Daily Times* Ad Alley Foreman.

Group Chairmen Elected

Group chairmen elected at the conclusion of the clinics are: Engraving, A. W. Irber; Line-casting, George Curle, retiring conference president, who is Chief Machinist of the Minneapolis *Daily Times;* Pressroom, Edw. O'Neil of the *Star-Journal;* Stereotyping, George (Buck) Anderson of the *Daily Times;* Composing Room, Al Rosene of the Duluth (Minn.) *Herald* and *News-Tribune*.

Ortleb Talks

Concluding the educational phase of the first day's session was a talk by George Ortleb, Federated Metals Div. of American Smelting & Refining Co., Chicago, who discussed the proper han-

HOW TO SELECT COLORS THAT SELL

READ WHAT USERS SAY:

"The Earhart Color Plan is absolutely the best scheme for securing effective color combinations we've ever seen. It is simple and applicable to the every-day kind of business, as well as to trick jobs."
—A St. Louis Printer

"Our two copies of your Color Plan have replaced all other 'charts' and 'books', and are the only reference we use when we need help in using colors."
—Printer in Houston, Tex.

"I am satisfied that your Color Plan is a valuable adjunct to any printing establishment, if for no other purpose than to show customers."
—A Chicago Printer

Price $3.00

MAIL THIS COUPON NOW

Select More Effective Color Combinations Quickly... with

EARHART COLOR PLAN

★ This practical color plan is helping many printers get more business . . . and likewise saving them time and money The EARHART COLOR PLAN eliminates all guesswork in color selection . . . makes it easy to find out-of-the-ordinary, highly effective color combinations. You'll find this proven plan easy to use and just as applicable to the every-day kind of business as it is to the special job. Put this inexpensive device to work for you now. Order today.

PRINTING EQUIPMENT Engineer
1276 West 3rd St., Cleveland, Ohio

Please send me an EARHART COLOR PLAN.
....Check is attached
Name .....
Address .....
City and State .....

SAFETY·RELIABILITY·ECONOMY

CLINE
PRESS DRIVES
and
CONTROL
Reels, Tensions
and Pasters . . .

CLINE SYSTEM

CLINE ELEC. MFG. CO.
Chicago: 211 West Wacker Drive
New York: 220 East 42nd Street
San Francisco: 1st Nat'l Bank Bldg.

100% AUTOMATIC SLUG SAWING

Odd-measure slugs sawed to any measure as ejected from line-casting machine. Fast — accurate — economical. Write for folder and prices.

MOHR LINO-SAW CO.
128 N. Union St. Chicago

MOHR SAW

The P-Double-E Equipment and Supplies Catalog tells you where you can get it.

THE LITTLE CHIEF REMELTER___

This type-metal remelting furnace which was originally designed to conform to the requirements of the New York City Board of Health can be operated in the Composing Room, if desired, without discomfort. It is built for continuous operation and with a pot capacity of only 245 lbs., yet remelts as much as 2500 lbs. in a work-day.

YOUR SAVING IN DROSSAGE, FUEL AND LABOR WILL SOON PAY THE COST OF THIS REMELTER

With this remelting unit, one man can perform several duties as the Remelter takes care of itself, being thermostatically controlled which eliminates any possibility of the metal burning up. The unit shown here includes the Twin-four water-cooled mold with 8 cavities. It casts Slip-off ingots.

FEATURES

INSULATED POT conserves the heat.
JORDAN INTERNAL VALVE prevents the metal from freezing in the spout.*
SPILLWAY draws off overflow if pot runs over.
THERMOSTATIC CONTROL regulates the heat.
QUICK-HEAT MUFFLER cuts down melting time by drawing heat through the body of the metal.*
EXHAUST HEAD collects the fumes and expels them into the flue.
SLUG MAGAZINE feeds metal to the pot automatically.*
INTERNAL LIGHTING permits efficient skimming.
FUEL: Gas (manufactured, natural or mixed), Electricity. * Patented

Write for Photographs, Prices and Deliveries

United American Metals Corporation

200 Diamond Street, Brooklyn, N. Y., 4101 Curtis Avenue, Baltimore, Md.
2246 W. Hubbard Street, Chicago, Ill.
785 Bryant Street, San Francisco, Cal., 2448 E. 25th St., Los Angeles, Cal.

KEEP IN THE RACE

with

CHAMPION BLACKS

- *Champion Half-Tone*
- *Champion Super*
- *Champion Book*

As well known in the printing trades as are the heroes of fiction and fact — our Champions are champions in fact, not fiction. Prove to yourself their dependable performance.

Beneath this stack, experience, research and service are at your command.

Sinclair and Valentine Co.

MAIN OFFICE AND FACTORY: 611 WEST 129th STREET, NEW YORK, N. Y.

Albany Boston Cleveland Detroit Jacksonville Los Angeles Nashville Philadelphia
Baltimore Charlotte Dallas Havana Kansas City Manila New Haven San Francisco
Birmingham Chicago Dayton Miami New Orleans Seattle

Ruled Forms Revolutionized!

Write for Particulars

MONO-TABULAR BROACH

FAST—SIMPLE—ECONOMICAL

REPRESENTATIVES:

M. L. Abrams Co. . . . . Cleveland, Ohio
A. E. Heinsohn . . . . . Denver, Colo.
Milwaukee Printers' Roller Co. . . . . Milwaukee, Wis.
Payne & Walsh Corp. . . . . New York City
Chas. H. Rodieck (West Coast) . . Box 1364, Hollywood, Cal.
Southeastern Printers Supply Co. . . . . Atlanta, Ga.
Type & Press of Illinois . . . . . Chicago, Ill.

CANADIAN REPRESENTATIVES:

Toronto Type Foundry Co., Ltd. . Toronto, Ont. and Montreal, Que.

Universal Mono-Tabular Corporation

1905 BRYAN STREET DALLAS, TEXAS

Scrap Allowance Plan

IN this month's issue of *Printing Equipment Engineer*, the Miller Printing Machinery Company is announcing details about the War-Time Miller Scrap Allowance Plan. Through the Plan, printers may scrap useless cylinder presses and in turn the Company offers a choice of two premiums in payment for the presses so scrapped.

Objectives of the Plan are to release a potential tonnage of scrap metal for the manufacture of armament; elimination of obsolete presses which, if resold, might become a menace to the standards of the printing industry; enable those who contemplate modernization to set up a reserve for rehabilitation of their pressrooms after the war; assist in liquidating unneeded equipment for its maximum cash value now.

By previous arrangement with the Miller Printing Machinery Company a printing concern may scrap one to six cylinder presses and retain the cash scrap value for it. In turn, the company will issue to that concern a credit certificate which may be applied toward the purchase of new Miller Automatics when such presses again become available. The credit certificate will be good until two years after the end of the present war. "Thus," states the company, "the printer actually receives three times the scrap value of the old equipment."

As a second option, the printer is invited to send to the Miller Company a sum equal to the amount which he receives in scrap for his old presses. The Miller Company will then have U. S. Defense Savings Bonds and Stamps equal to that amount issued and forwarded to the printer, to be the sole property of the printer. "Under this Plan," the Miller Company states, "the printing concern actually receives four times the scrap value of the old equipment."

Matrix Maintenance Booklets

Intertype Corporation has published two booklets. One is entitled *Maximum Service from Intertype Matrices* and the other carries the title *An Ounce of Prevention is Worth a Pound of Cure*. In the first of these booklets is discussed what should be done when using new matrices in outstanding machines. This discussion is applicable to machine adjustment in regular composing room use, especially when new sorts matrices are run into the magazine. The other booklet shows what machine parts are subject to wear in relation to matrix use. Also discussed are the tools necessary for keeping machines in first class operating condition especially with respect to conservation of matrix fonts.

George Curle (center) first Northwest Newspaper Mechanical Conference president, led off the dinner at Minneapolis the night of February 14, then turned affairs over to Toastmaster M. M. Oppegard (right), Publisher of the Grand Forks (N.D.) Herald. Interested in the arrival of further viands was Ed Funk (left) of the Waterloo (Ia.) Courier.

dling of metal, the effects of the war on metal and numerous other metal problems. Questions and answers followed his talk.

The Banquet

The first day's sessions ended with the banquet at which M. M. Oppegard, Publisher of the Grand Forks (N.D.) *Herald*, was toastmaster. Speakers were Paul J. Ocken and B. H. Ridder. Mr. Ocken emphasized that conferences such as this are going to be needed more and more as time goes on. For years, he said, the printer has learned much about technical developments from the supply men. From them the printer has learned of new methods and new equipment, he said, but with the tire problem becoming more stringent these salesmen will not make as many trips through their territories as frequently and they will be missed as educational missionaries.

As to local conditions, Mr. Ocken said, there is not so much cause for business fear as in some other parts of the country. This community being an agricultural one, economic conditions will not rise as high nor fall as low as the more specialized industrial regions.

Publisher Ridder told of his experiences in meeting and talking with Hitler, Goering, Goebbels and Himmler several years ago; their attempt to draw him into fifth column activities and their violent effort to "break" him by setting up a rival German language newspaper in New York. Hitler, he described as thoroughly erratic and resentful of all persons who knew him when he was down and out; Himmler he described as the most powerful figure in Germany through his rule of the gestapo.

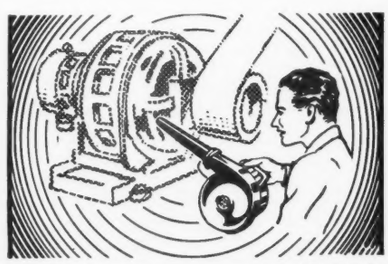
On February 15 the conference moved to the plant of the St. Paul *Dispatch-Pioneer Press*, where the visitors looked over that company's mechanical departments, heard discussions, watched production operations and finally went to the newspaper's auditorium for luncheon and election of officers.

New Officers

The following officers were elected to serve during the 1942-1943 year: Photoengraving Superintendent D. D. Curriden of the Minneapolis *Star-Journal* and *Tribune* engraving department was made President; First Vice President is Mechanical Superintendent Eric Ridder of the St. Paul *Dispatch-Pioneer Press;* Joe Hicks of the St. Cloud (Minn.) *Times*, was elected Second Vice President, and Instructor V. G. Eck of Dunwoody Institute, Minneapolis, was made Secretary-Treasurer.

SYNTRON
REG. TRADE MARK
"Vibrating"
PAPER JOGGERS
Speed up the Job
Cut Labor Costs
Eliminate Effort
Made in 3 sizes
SYNTRON CO.
577 Lexington Ave., Homer City, Pa.

QUICKER CLEANUPS
at Lower Cost
with the
TORNADO
BLOWER-CLEANER



IN your all-out defense against dust danger and damage, use the TORNADO. Gets dust, dirt and lint *all out* of motors, linotypes, presses, folders. Makes motors and machines last longer. Also convertible for vacuum-cleaning of shelving, paper stock and type cases. Adaptable for spraying paint and insecticide. Keep your costs down — your profits up — by keeping your plant clean with a TORNADO.

Write for details and Free Trial Offer!

TAKE THE DUST OUT OF DUSTRY
with BREUER'S BALL BEARING
TORNADO
PORTABLE ELECTRIC BLOWER

BREUER ELECTRIC MFG. CO.
5114 N. Ravenswood Ave., Chicago

DUPLEX PRESSES

Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
Flat Bed • Stereo Machinery

The Duplex Printing Press Co.
Battle Creek, Mich.

FOR SALE

1 Rebuilt R. Hoe & Co. Mat Roller.
9 Full Eight Column Hand Box Chases.
1 Metal Heat Gauge.
1 Washington Style Hand Press.

Address — **Geo. H. Ernewein, 1084 Kensington Ave., Buffalo, N. Y.**

$325 **GET THE FACTS!** ON THE NEW *Rouse* BAND SAW
H. B. ROUSE & COMPANY
2216 N. WAYNE AVE., CHICAGO, ILL.

ADJUST-O-GUIDE for Linotypes and Intertypes

When applied in place of regular mold disk guide on Linotypes and Intertypes enables you to obtain, by simple means, rigid control of play in mold disk in relation to back trimming knife. Adjust-O-Guide prevents uneven typehigh trim, prevents premature dulling of back knife and scoring mold bases, improves side knife trim, eliminates frequent knife adjustments and reduces press makeready. Send for illustrated bulletin.

Adjust-O-Guide Co., 25 N. 16th St., Denison, Iowa

Free! **EVERY PRESSMAN WANTS THIS BOOKLET**

Helpful hints about handling inks, compounds, driers, etc. Valuable information prepared by experts. Write for it on your firm letterhead. It's FREE!

E. J. KELLY CO. 1807 N. Pitcher St., Kalamazoo, Michigan

INVESTIGATE

Cushman Flat and Curved Plate Routers *and*
Cushman Offset motors for Line-casting machines

CUSHMAN ELECTRIC COMPANY, 69 So. Main St., Concord, N. H.

RICHARDS Saws SINCE 1910

"MULTIFORM"
"ELECTROMATIC"
"DOMORE" "CLIPPER"
SAWS — ROUTERS — DIES
J. A. RICHARDS CO., Kalamazoo, Mich.

Weatherproof as an old salt - - *that's why*

CROMWELL TYMPAN

helps you produce better looking printing at bigger profits

Cromwell Tympan is impervious to excess moisture, sudden changes of temperature or extremes of hot and cold. It will not shrink, swell or turn soggy.

THE CROMWELL PAPER CO.
4801-39 S. WHIPPLE STREET . . . . . CHICAGO, ILL.

---

35 COLORS, BLACKS, WHITES, COMPOUNDS

ipi Everyday INKS

ARE SPECIALLY DESIGNED FOR AUTOMATIC PRESSES

INTERNATIONAL PRINTING INK
BRANCHES IN PRINCIPAL CITIES

WANTED TO BUY — Standard or special printing presses similar to tag machine, platen type only, for specialized class of work. Any type or age. Describe and state price. Reply Box 148, care of PRINTING EQUIPMENT Engineer, 1276 W. Third Street, Cleveland, Ohio.

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

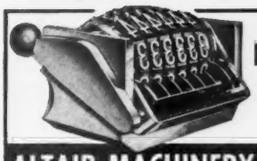
Conserve SPACEBANDS AND MATRICES

By regular daily use of the **FW-45 Automatic Spaceband Cleaner** which cleans and polishes 30 line-composing machine spacebands in 45 sec. Get rid of the drudgery of cleaning spacebands by hand, the efficiency of which varies with the person doing the cleaning. Send for illustrated Bulletin in which is described a truly useful machine.

FULLER MACHINE CO., 17 Haigh Ave., Schenectady, N. Y.

BUY AND SPECIFY "AMERICAN"

SYNTHETIC and COMPOSITION ROLLERS
Built for Longer Wear — Better Presswork
AMERICAN ROLLER CO. 1342 N. Halsted St., Chicago, Ill.
225 N. New Jersey St., Indianapolis, Ind. • 1531 Branch St., St. Louis, Mo.



NATIONAL
ROTARY NUMBERING HEADS
for dependable, accurate numbering (right angle & parallel) at highest cylinder speeds

ALTAIR MACHINERY CORPORATION 55 VANDAM STREET NEW YORK CITY

Advertisers' Index

MARCH, 1942

Adjust-O-Guide Company....39
Altair Machinery Co....39
American Publishers Supply....27
American Roller Company....39
Atlantic Zinc Works, The....29
Booth, The E. A., Rubber Co....33
Brandtjen & Kluge, Inc....3rd Cover
Breuer Electric Manufacturing Co....38
Burgess Cellulose Co....30
Certified Dry Mat Corp....28
Challenge Machinery Co., The....35
Champion Paper & Fibre Co., The.... 4
Cline Electric Manufacturing Co....36
Cottrell, C. B., & Sons Company....15
Cromwell Paper Company, The....39
Cushman Electric Co....39
Duplex Printing Press Co., The....39
Eastern Newspaper Supply....33
Flint, Howard, Ink Company....1
Fuller Machine Co....39
Gilbert Paper Company, The....31
Hammond Machinery Builders, Inc....35
Harris-Seybold-Potter Co....2nd Cover
Herrick, William C., Ink Co., Inc....25
Hoe, R. & Company, Inc....8
Imperial Type Metal Co....23
International Printing Ink Corporation....39
Intertype Corporation....4th Cover
Kelly, E. J., Co....39
Kimble Electric Company....35
Lanston Monotype Machine Company...35
Linotype Parts Co....28
Ludlow Typograph Co.... 3
Mergenthaler Linotype Co....17
Miller Printing Machinery Company....6-7
Milwaukee Saw Trimmer Corp....36
Mohr Lino-Saw Co....36
Reid, Wm., & Co....39
Richards, J. A., Co....39
Rouse, H. B., & Co....39
Royle, John, & Sons....25
Simonds Worden White Company....25
Sinclair & Valentine Company....37
Syntron Company....38
Teletypesetter Corp....25
Timken Roller Bearing Company, The....19
Tingue, Brown and Co....30
United American Metals Corp....37
Universal Mono-Tabular Corporation....37
Vandercook & Sons....27
Wetter Numbering Machine Co....23
Wood Flong Corp....34
Wood Newspaper Machinery Corp....21

free TECHNICAL INFORMATION and LITERATURE *for you*

Offered by Display Advertisers in PRINTING EQUIPMENT Engineer

For information circle the number on the convenient postage-paid return card corresponding to the paragraph in which you are interested. Give your name and title, company name and address, then mail. Manufacturer or supplier will send mechanical and production executives latest information. Keep informed—there is no obligation.

Composing Room

1 SAW TRIMMER—Send for booklet on C&G No. 3A Saw Trimmer, and C&G Routing Jigsaw and Type High Machine. See page 36.

2 IMPOSING SURFACES—Send for complete information on the Challenge semi-steel imposing surfaces, including prices. See advertisement on page 35.

3 SAW—Return reply card for bulletin describing Hammond new modern Mercury and bench model Mercury saws. See advertisement, page 35.

4 CUT CEMENT—Send 75c for a trial tube of Booth Zinc Cut Cement. See advertisement page 33.

5 COMPOSING MACHINE — Intertype offers you a booklet entitled "An Ounce of Prevention is Worth a Pound of Cure" outlining a systematic checkup on Intertype. Advertisement on back cover.

6 TELETYPESETTER—Circle this number for informative booklet on composition with Teletypesetter. See advertisement on page 25.

7 REMELTER—Your request brings photographs and complete information on the Little Chief Remelter. See advertisement page 37.

8 RULE FORM BROACH—Get more information on "The machine that is revolutionizing rule form production." Advertisement on page 37.

9 MATRICES—Send for copy of "The Care and Maintenance of Matrices" just off the press. See advertisement page 17.

10 COMPOSING MACHINE—Specimen sheets on "Big Heads For Big News" will be sent on request. See advertisement page 3.

11 REPLACEMENT PARTS—Send for your copy of Linotype Parts Co. catalog on replacement parts for linotypes. See advertisement page 28.

12 COMPOSING MACHINE—Circle this number for the complete story of the Monotype "3 Way System." See advertisement page 35.

Platemaking

13 STEREO SUPPLIES—Return post card for latest copy of Eastern Newspaper's catalog on stereotype equipment and supplies. See page 33.

14 DRY MATS—Certified Dry Mat Company offers an interesting booklet on plate duplication with dry mats. See advertisement, page 28.

15 ZINC—Get the informative booklet "Getting Down to Zinc Facts" from Atlantic Zinc Works. See advertisement, page 29.

16 PACKING FELT—American Publishers Supply offers samples of Superior Glutex Packing Felt. As advertised on page 27.

17 DRY MATS—To see their outstanding points, get a sample of Wood dry mats for newspapers as advertised, page 34.

18 DRY MATS—If you want a Burgess Chrome Mat salesman to call, circle this number on return card. Advertisement, page 30.

19 ROUTING CUTTERS—For your copy of the John Royle Catalog 425 on routing cutters, circle this number. Advertisement on page 25.

Pressroom

20 PRESSES—Consult R. Hoe & Company for current press problems. See advertisement page 8.

21 OFFSET PRESSES—Harris-Seybold-Potter offers help in maintaining your offset equipment. Take your problem to them. Advertisement inside front cover.

22 NUMBERING MACHINES—Wetter Numbering Machine Company offers you a unique booklet "Numbering for Profit". See advertisement, page 23.

23 SCRAP PLAN—War time scrap allowance plan. Full information on this new Miller plan sent on request. See advertisement pages 6 and 7.

24 JOB PRESSES—Brandtjen & Kluge will send latest information on the "press with the perfect control." As advertised on 3rd Cover.

25 PRESS CONSULTATION—For engineering counsel and help in solving production problems, consult C. B. Cottrell & Sons Company. See advertisement page 15.

26 PRESS BLANKETS—Tingue, Brown & Co. will gladly send you data on specifications of Tingucork and Cushion Cork, "the right combination." Advertisement on page 30.

27 PROOF PRESSES—Complete information available on proof presses upon request. See advertisement page 27.

28 NEWSPAPER MACHINERY—Wood Newspaper Machinery Company is glad to offer consultation on present equipment. Advertisement page 21

Paper and Ink

29 PAPER—Champion Paper & Fibre Company offers information on papers for advertising. See advertisement, page 4.

30 PAPER—Complete information on Gilbert Bond and Gilbert Ledger papers available to all printers. Circle this number and see their advertisement. page 31.

31 INK—Ask for literature on Sinclair & Valentine Champion Black. Advertisement, page 37.

32 INK—"Ten Ways To Avoid Offset". This is a new booklet which should be of interest to every printer. Circle this number on card for your copy.

33 COLOR PLAN—Send $3.00 for Earhart Color Plan on how to select colors that sell. See advertisement page 36.

34 INK—Use the post card to get your copy of the Flint Color Selector. See advertisement page 1.

Miscellaneous

35 MOTORS—Kimble Electric Co. offers a booklet on motors for use in the printing industry. See advertisement page 35.

36 BEARINGS—The Timken Roller Bearing Co. will send literature only to those requesting on company letterhead. See advertisement page 19.

12 SECONDS

. . Twelve seconds! constituted man's first victory over the air. Orville and Wilbur Wright flew the first airplane on December 17, 1903 at Kitty Hawk, North Carolina.

The first airplane was far removed in appearance and performance from the modern plane, however, even though these two machines differ greatly in appearance and performance, basically the design has changed very little. It has remained the same because it was correct in the first place.

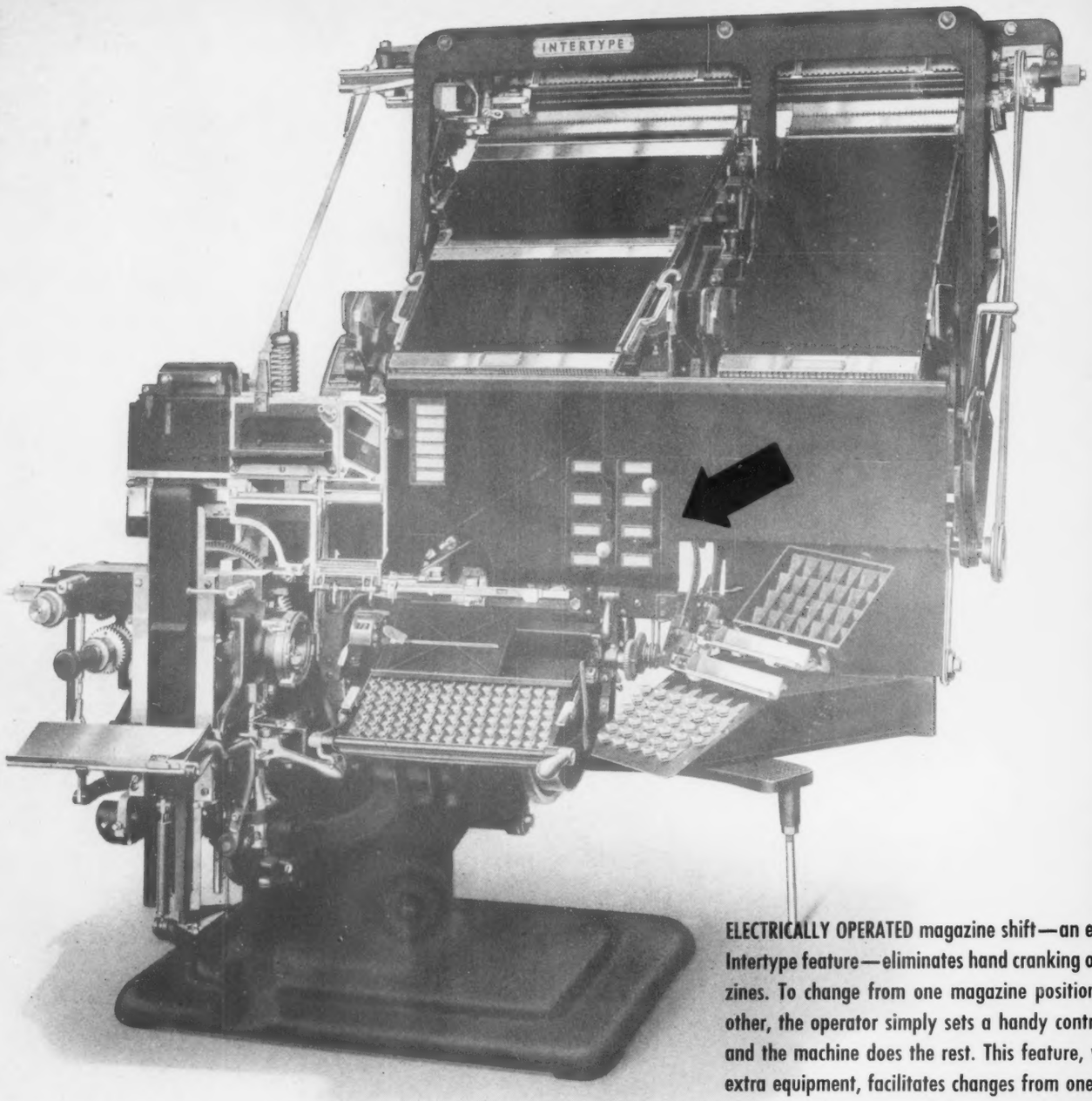
The Kluge is based on a theory of printing that has long been established as a practical money maker in the printing trade. Principles seldom change. In the final analysis, there is nothing basically new in the world. The airplane of today is the development of a basically correct theory of flight, conceived by the Wright Brothers. In like manner, the modern Kluge is the development of a basically correct theory of flat surface printing.

These developments in construction and operational design have greatly increased the scope of the platen press. Halftones, solids, to type, on any stock from tissue to 14 ply board are now within the profitable realm of the Kluge.

★ ★ ★ ★ ★

KLUGE AUTOMATIC PRESS

BRANDTJEN & KLUGE INC.
Saint Paul, Minnesota



ELECTRICALLY OPERATED magazine shift—an exclusive Intertype feature—eliminates hand cranking of magazines. To change from one magazine position to another, the operator simply sets a handy control knob and the machine does the rest. This feature, which is extra equipment, facilitates changes from one font of type to another, conserves the operator's energy, and adds considerably to the machine's productiveness.

New typesetting machines, **like a multiplicity of other products, may be difficult to obtain as time goes on, or they may be obtainable only after abnormal delays. Intertype suggests, therefore, (1) that you take good care of existing machines and matrices, (2) that you replace worn-out parts before they cause damage to adjacent or related parts of the machine, and (3) that orders for essential new machines be placed as far in advance as possible. Above all, conserve existing equipment. Intertype, Brooklyn, N. Y.**

INTERTYPE